PRE-COLLISIONAL EXTENSIONAL TECTONICS IN CONVERGENT CONTINENTAL MARGINS: THE CRETACEOUS EVOLUTION OF THE CENTRAL CORDILLERA OF THE COLOMBIAN ANDES.

By

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RESUMEN EXTENDIDO

Rastreando fases extensionales en orogenos acrecionarios: evolución Cretácica de la Cordillera Central en los Andes Colombianos.

Las márgenes convergentes se caracterizan por zonas de subducción que funcionan durante largos periodos de tiempo (>200 ma). Estos límites convergentes son dinámicos y están en constante transformación, alternado periodos extensionales con periodos donde dominan los regímenes compresivos. Los cambios entre una tectónica compresiva y una extensional están relacionados con cambios en el ángulo de subducción, el ángulo entre los vectores de movimiento de la placa, la actividad mantelica y la llegada de bloques exóticos a la margen. Los regímenes extensionales en las márgenes convergentes son los responsables del desarrollo de: cuencas retro-arco, cuencas transtesivas, apertura de nuevos océanos y la fragmentación de la corteza continental; por otro lado una tectónica compresiva está asociada con la aparición de: cinturones de plegamiento y cabalgamiento, el engrosamiento cortical, la inversión de cuencas sedimentarias y el desarrollo de cuencas flexurales. La acreción de bloques alóctonos y para-autóctonos durante las fases compresivas suelen borrar parcialmente el registro geológico de las fases extensionales.

Los Andes del norte son una provincia geológica donde la subducción se ha re-instalado desde el Mesozoico medio, después de la fragmentación de Pangea. Esta provincia se caracteriza por la acreción de bloques exóticos durante el Cretácico Superior y el Cenozoico, que se alternaron con la historia de subducción continua. En el segmento oocidental de los Andes Colombianos afloran varias unidades formadas durante El Cretácico Inferior, que debido los múltiples eventos colisiónales posteriores han sido deformadas y metamorfoseadas en múltiples ocasiones, además las relaciones originales entre estas unidades han sido parcialmente borradas lo cual ha llevado a agrupar estas rocas en litodemas cuya historia es todavía poco comprendida. Dentro de estas unidades se encuentran el Complejo

Arquia, el Complejo Quebradagrande, el Complejo Metasedimentario Aránzazu y rocas sedimentarias como: la Formación Abejorral y la Formación Valle Alto. Debido a que estas unidades litodedemicas agrupan rocas formadas en distintos escenarios tectónicos y en distintos periodos, han sido propuestos múltiples modelos evolutivos y paleogeográficos para el Cretácico en los Andes del norte.

Con el fin de rastrear la evolución Cretácica de los Andes del norte en este trabajo se combinaron distintas técnicas dentro de una sección de referencia ubicada en el límite entre los departamentos de Antioquia y Caldas, esta sección fue controlada con cortes regionales, dentro de las técnicas utilizadas se incluyen: cartografía geológica, geología estructural, estratigrafía, procedencia y geocronología U-Pb. Dentro de los resultados obtenidos se identificaron las fases extensionales que fragmentaron y modificaron la margen continental durante el Cretácico Inferior (140-100 ma), este periodo se caracterizó por la apertura de nuevos océanos y mares marginales asociados a la generación micro-continentes y fragmentos de corteza extendidos ("Ribbons"), la extensión fue seguida por fases compresivas que generaron la aparición de varias zonas de subducción durante el Cretácico Superior (100 – 80 ma), entre 80 y 60 ma varios bloques aloctonos colisionan de manera diacrónica con la margen continental y con los bloques extendidos durante el la extensión, este periodo se caracteriza por la inversión de cuencas, engrosamiento cortical y el reinicio de la subducción. Los Andes del norte presentan una oportunidad única para entender la evolución de las márgenes convergentes y la temporalidad de los distintos escenarios tectónicos.

A continuación se presentan los resultados organizados en forma de un artículo de divulgación que será sometido a la revista Geological Society of America Bulltettin, y que se presenta para optar por el título de maestría.

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ABSTRACT

The Cretaceous tectonic evolution of the Northern Andes continental margin is characterized by continuous convergence that allowed the formation of continental volcanic arcs, back arc basins, extensional divergent tectonics and accretion of exotic terranes. Such a record, particularly the extensional phases, is commonly hidden by the overimposition of deformational events associated with evolution of the subduction configuration, collision of exotic terranes and strike slip fragmentation. We integrate field geology, stratigraphy, U-Pb provenance and geochronology to improve the understanding of the Early Cretaceous pre-deformation phases in the western flank of the Central Cordillera and to refine the understanding of Cretaceous to Early Paleogene paleo-tectonic evolution. Lower Cretaceous sedimentation was deposited over Triassic metamorphic units and includes a transgressive record characterized by fan delta conglomerates overlaid by distal turbidities and a syn-sedimentary volcanic record at 100 ma. This record is related to continental crust extension and sea floor spreading that formed ribbons and microcontinents separated by oceanic crust. Following this extensional event, an 85 – 82 Ma two-arc system seems to have been formed over the main continental margin and an isolated microcontinent. These two arcs collided and were also juxtaposed to another allochthonous Cretaceous oceanic arc between 80 Ma and 60 Ma.

1. INTRODUCTION.

Continental margins are characterized by long-lived subduction systems in which their tectonic evolution comprises the succession of extensional and compressional tectonic scenarios (Cawood et al., 2009). Such evolution may include the formation of extensional arcs, back arcs and transtensional basins and strike slip translation of fore arc slivers (Busby, 2011, 2012; Pubellier and Meresse, 2013; Spikings et al., 2014a; Xiao et al., 2004; Zanchi, 1994), or it may include formation of compressional arcs with associated retro-arc foreland basins, fold and thrust belts and major exhumation events (Busby, 2012; Ramos, 2009, 2010a). Such changes in the evolution of the convergent margin are associated with major tectonic processes, including changes in mantle convection, age and angle of the subducted plates, or changes in the convergence vectors (Faccenna et al., 2001; Matthews et al., 2012; Moulin et al., 2010).

Within extensional convergent margins, growth of back-arc and transtensional basins end with the formation of new oceanic crust that will allow the formation of major oceanic basins separated by continental pieces (micro-continents), or that growth may form continental ribbons that represent hyperextended continental crust attached to the continental margin (Lister et al., 1986; Pubellier and Meresse, 2013; Péron-Pinvidic and Manatschal, 2010; Sengor, 2004).

This extensional record is often overprinted by overimposed compressional phases associated with continuous subduction setting (Collins, 2002), or by collisional phases, which typically include the accretion of seamounts, oceanic plateaus, oceanic arcs and para-autochthonous blocks such as continental ribbons and micro-continents that return to the continental margin (Hall, 2009; Johnston, 2008; Pubellier and Meresse, 2013).

Discriminating between extensional tectonics and terrane accretion is therefore fundamental for the evaluation of horizontal continental growth in convergent margins and the construction of accurate tectonic models (Busby, 2011, 2012; Bédard and Harris, 2014; Hall, 2009; Johnston, 2008).

The Cretaceous tectonic evolution of the northern Andes has been classically defined as an orogen characterized by the accretion of exotic oceanic terranes during the Mesozoic (Gansser, 1973; Ramos, 1999). Such collisional events and the strike slip fragmentation of the continental margin have partially destroyed the former record of extensional phases, obliterating evidence of the possible existence of back-arc basins and extended continental crust, or evidence of the former existence of multiple subduction systems and accretionary events (Ayala et al., 2012; Bayona et al., 2010; Cardona et al., 2011a; Pindell et al., 2005; Spikings et al., 2000; Vallejo et al., 2006; Van der Lelij et al., 2010; Villamil and Pindell, 1999; Zapata et al., 2014).

Figure 1. Proposed tectonic models for the Colombian Central and Western Cordillera during the Cretaceous. Black arrows are indicative of exhumation, modified from Spikings et al. (2014), Villagómez et al. (2013), and Nivia et al. (2006).

The Cretaceous volcano-sedimentary record of the Central Cordillera of the Colombian Andes (Feininger et al., 1972; Gonzalez, 2001; Toussaint and Restrepo, 1996) represents a major vestige of this complex tectonic evolution. Its geological evolution has been related to contrasting tectonic scenarios, such as continental rifting, sin-orogenic accumulation or intra arc extension (Cochrane et al., 2011; Nivia et al., 2006; Sarmiento - Rojas et al., 2006b; Spikings et al., 2014b; Villagómez and Spikings, 2013).

These contrasting scenarios have been reconstructed based on large-scale paleogeographic models or from analysis of regionally distributed and dispersed samples (Kerr et al., 1996; Nivia et al., 2006; Spikings et al., 2014a; Toussaint and Restrepo, 1978; Villagomez et al., 2011), giving rise to a more limited and less precise understanding of the nature and the chronology of the Cretaceous tectonic record and the role of extensional tectonics in the growth of the northwestern Andes **(Figure 1)**.

In this contribution, we present new field, stratigraphic, U-Pb zircon geochronology of volcanic rocks as well as detrital provenance of volcanic and sedimentary rocks grouped within the Quebradagrande Complex and the Abejorral Formation (Botero, 1963; Nivia et al., 2006; Rodriguez and Zapata, 2013; Spikings et al., 2014a; Villagomez et al., 2011); these observations are used to improve the understanding of the Cretaceous pre-collisional extensional phases in the cordillera. These results, integrated with additional geochronological constraints on the Pre-Jurassic basement of the Central Cordillera, support the existence of a major Lower Cretaceous extensional event responsible for the generation of continental ribbons and micro-continents associated with the opening of marginal seas and the formation of a major ocean that was later closed during the Late Cretaceous. The apparent ca. 40 Ma duration of the extensional event before reaching the seafloor spreading stage suggests that rifting of continental crust in the convergent continental margin can be a long-term process (Duque-Trujillo et al., 2014; Umhoefer, 2011).

2. GEOLOGICAL FRAMEWORK.

2.1 General configuration of the northwestern Andes.

The northern Andes of Colombia comprise three different cordilleras that grew as a result of several episodes of continental arc growth, extension, oceanic terrane accretion and strike slip motion during the Meso-Cenozoic (Bayona et al., 2006a; Cardona et al., 2010; Escalona and Mann, 2010; Montes et al., 2010; Pindell et al., 1998; Spikings et al., 2005; Toussaint, 1996; Villagómez et al., 2011; Zapata et al., 2014).

The pre-Cretaceous basement of the Central Cordillera in Colombia is composed of several pre-Mesozoic and Mesozoic metamorphic units (Gonzalez, 1988), including Ordovician gneisses (Martens et al., 2014; Ordóñez Carmona and Pimentel, 2002), low to medium grade meta-sedimentary units and Permo-Triassic micaceous granitic rocks grouped in the Cajamarca complex **(C.C)** (Cochrane, 2013; Maya and

Gonzales, 1995; Villagómez et al., 2011). The Jurassic magmatism includes plutonic bodies with associated volcanic sequences, as well as metamorphic units with ages ranging between 210 ma and 130 ma that are mostly located the eastern flank of the Cordillera and extending towards the Magdalena valley (Alvarez, 1984; Aspden et al., 1987; Blanco et al., 2014; Leal, 2011; Leal-Mejia, 2011).

The pre-Cretaceous basement was intruded by several arc-related calc-alkaline plutonic rocks during the late Cretaceous, with ages between 100 – 85 ma (Correa et al., 2006; Villagómez et al., 2011).

Paleogene arc-related granitoids are less exposed, and have been described in several localities along the Central Cordillera (Aspden et al., 1987; Bayona et al., 2012; Cardona et al., 2011a; Ordóñez-Carmona et al., 2001, 2011; Spikings et al., 2014a).

On the eastern and western flanks of the Western and the Central Cordillera and in the Cauca Valley, outcrops extremely deformed geological units, including Cretaceous metamorphic rocks and Lower and Upper Cretaceous volcano-sedimentary sequences. These units are separated by major N-S fault systems: San Jeronimo fault system **(S.J.F.S)**, Silvia Pijao fault system **(S.P.F.S)** and Cauca-Almaguer fault system **(C.A.F.S)**. These major structures have been active since the Cretaceous with several reactivation episodes (Aspden, 1984; Aspden et al., 1987; Gonzalez, 1980a, 1980b; Gonzalez, 1988; Kerr et al., 1996; Maya and Gonzales, 1995; Nivia et al., 2006).

Figure 2. Geological map from the study region, samples, and stratigraphic sections: (C.A.F.S), Cauca-Almaguer Fault System; (S.P.F.S), Silvia Pijao Fault System; (S.J.F.S), Silvia Pijao Fault System.

The Western Cordillera is composed of a series of volcanic mafic rocks associated with gabbroic intrusives and deep marine sediments (Aspden, 1984; Barrero, 1979; Kerr et al., 1997; Sinton et al., 1997). The origin of these units has been associated with volcanic arc and oceanic plateau settings. The ages for the Western Cordillera plateau province consist of Berrasian-Albian fossil ages and late Cretaceous geochronology (Gonzalez, 2001; Hastie and Kerr, 2010; Kerr et al., 1997; Kerr et al., 1996; Kerr et al., 2003; Villagómez et al., 2011; Weber et al.). The Plateau units are intruded by several plutonic bodies formed in volcanic arc settings, with ages ranging between 100 and 85 ma (Gonzalez, 2001; Villagomez et al., 2011; Weber et al., 2015; Zapata et al., 2013). Similar bodies have been reported in Ecuador, Colombia and the Leeward Antilles (Gonzalez, 2001; Spikings et al.; Vallejo et al., 2006; Van der Lelij et al., 2010; Villagómez et al., 2011; Weber et al., 2015; Zapata et al., 2013). This intra-oceanic composite terrane was accreted to the continental margin in the Late Cretaceous (Kerr et al., 1996; Restrepo and Toussaint, 1988; Spikings et al.; Villagómez and Spikings, 2013).

The Eastern Cordillera comprises an Early Paleozoic metamorphic and granitoid basement covered by Middle to Late Paleozoic sediments that is covered by Mesozoic extensional basins that evolve to a more quiescent eustatically dominated basin. These basins were tectonically inverted since the Early Paleogene and experienced a change to more continental basin environments (Bayona et al., 2012; Horton et al., 2010; Mora et al., 2009; Parra et al., 2009; Sarmiento - Rojas et al., 2006a; Saylor et al., 2011; Taboada et al., 2000; van der Lelij et al.).

2.2 Cretaceous geological record of the Central Cordillera

Early Cretaceous siliciclastic stratigraphic units have been described along both flanks of the Central Cordillera and have been grouped within different stratigraphic units: the Abejorral Fm. **(A.F.)**, Aranzazu metasedimentary complex **(A.M.C),** Valle Alto and La Soledad Formations and the Berlín, San Luis, and Segovia Sediments (Burgl and Radelli, 1962; Gonzalez, 1976, 1980a, 1980b; Hall et al., 1972; Moreno-Sánchez et al., 2008). These units are composed of continental to transitional conglomerates and quartz sandstones overlaid by fine-grain marine sediments. These Cretaceous sedimentary covers were unconformably deposited above the pre-Cretaceous basement. The stratigraphic sequences have been interpreted as transgressive depositional environments (Gonzalez, 1980a; Rodriguez and Rojas, 1985). Fossil remnants suggest Berrasian to middle Albian age for Valle Alto (Etayo, 1985; Quiroz, 2005) and Hauterivian to lower Albian age for **A.F.** and **A.M.C.** (Gomez, 1995; Gonzalez, 1980a). Some authors have interpreted these units as sin-rift related sedimentary units (Nivia et al., 2006), whereas other authors considered them as syn-collisional related strata (Spikings et al., 2014a; Villagomez et al., 2011).

The Quebradagrande Formation, initially defined by (Botero, 1963), was changed to a lithodemic status due to its complex deformation and major tectonic contacts, and was therefore named the Quebradagrande complex **(Q.G.C)** by Maya and González (1995). It is described as a deformed volcano sedimentary sequence in the western flank of Central Cordillera **(Figure 2)** and is composed of deformed and metamorphosed in very low to low grade metamorphic conditions, basaltic to andesitic lavas and pyroclastic rocks (Gomez et al., 1995; Moreno-Sánchez et al., 2008; Nivia et al., 2006; Rodriguez and Zapata, 2013; Villagomez et al., 2011). Sedimentary units include mudstones and chert intercalated with volcanic units, or thicker breccias, conglomerates and lithic sandstone units accumulated in transition environments (Gonzalez, 1980a). The fossil ages ranged from the Berrasian to the Albian (Botero, 1963; Gonzalez de Juana et al., 1980; Gonzalez, 2001), whereas the U–Pb zircon ages include a 112 ma tuff and a 114 ma diorite in the east of these units, close to contact with the pre-Cretaceous basement (Cochrane, 2013; Villagómez et al., 2011). A series of small intrusive bodies are mapped as the Romeral Gabbros; these plutonic rocks have been associated with the **Q.G.C.** (Gonzalez, 1980b; Hincapié Jaramillo et al., 2010; Toro Toro et al., 2011).

Different tectonic environments have been proposed for the **Q.G.C.,** including (1) an exotic allochthonous oceanic arc (Villagómez et al., 2011), (2) a continental extensional volcanic arc (Cochrane, 2013; Spikings et al., 2014b; Toussaint, 1996; Villagómez and Spikings, 2013), (3) extensional settings related to continental rifting associated with marginal basins (Nivia et al., 2006), and (4) a mid-oceanic ridge origin (Gonzalez, 1980a). However, the regional character of this interpretation and the paucity of detailed mapping and geochronological data make it difficult to precisely discriminate between these scenarios and track the long-term evolution of this volcano-sedimentary unit.

This volcano-sedimentary record has been correlated with similar rocks of the Alao Terrane in the Cordillera Real of the Ecuadorian Andes, and includes a common tectonic evolution (Cochrane et al., 2014b)

Several metamorphic units are located between the **C.A.F.S.** and the **S.P.F.S.** Amphibolites, low-grade schists, medium to high-pressure rocks and ultramafic rocks have been grouped as the Arquia Complex (Bustamante et al., 2011b; Maya and Gonzales, 1995; Toussaint and Restrepo, 1978). The timing of the metamorphism and the origin of these tectonic slices is still poorly understood. However, a metamorphism age (120 ma) was obtained in high and medium-pressure rocks. Additionally, the Ar-Ar geochronology indicates cooling ages of 117 – 100 ma for these units, related to different subduction and collision-related metamorphic environments (Bustamante et al., 2011a; C., 2014; Cristina., 2014; Villagomez et al., 2011).

Tectonic slices located on the western flank of the Central Cordillera include various lithostratigraphic units that are extensively deformed, exhibit complex structural, statigraphic relations with other units, and were formed in different time intervals and tectonic settings. These units have been defined as lithodemic suites, and their regional implications have end un major discussions and confusion (Moreno-Sánchez et al., 2008). In order to avoid nomenclature difficulties we will refer to this units by considering their tectonic position and emphasizing their affinity. We will use the term Arquia Complex to refer to the igneous and metamorphic rocks located between the **C.A.F.S.** and the **S.P.F.S.** (Maya and Gonzales, 1995), taking into account that these rocks have different ages and geological histories. For the rocks from the **Q.G.C.** we will use the definition of Maya and Gonzalez (1995), defining this unit as the volcanic rocks and associated clastic sequences between the **S.P.F.S.** and the **S.J.F.S.**, for the Lower Cretaceous clastic covers east of the **S.J.F.S.**, we will use separated definitions including the Barremian Valle Alto Formation (Gonzalez, 1976) Aptian-Albian correlatable **A.M.C.** and the **A.F.** (Burgl and Radelli, 1962; Gomez, 1995).

3. METHODS.

3.1 Conglomerate and sandstone provenance analysis.

Conglomerate clast counting was performed following the ribbon counting method (Howard, 1993). Clasts < 2 cm in size were excluded from the analysis. The results are presented in

	Quartz (%)	Sandstones (%)	Mudstones (%)	Chert (%)	Metamorphic (%)	Plutonic (%)	Volcanic (%)
L.A.F.	85	0	14	0	0	0	0
U.A.F.	33	16	16	0	25	2	9
Q.G.C.	6	45	5	26	1	0	17

Table 2.

Sandstone samples were collected, and 300 points were counted. Petrographic procedures followed framework analysis after (Dickinson, 1985) and (Folk, 1980), including the identification of various categories of igneous, sedimentary and metamorphic lithics. An additional high-resolution petrographic discrimination of quartz was performed according to the methodologies proposed by Basu et al., (1975). Petrographic results are presented in ***Table 3.*** *Sandstone framework analysis. Qm= monocrystalline quartz, Qsed= Polycrystalline sedimentary quartz, Qpd= Polycrystalline diffuse quartz, Qpf= polycrystalline foliated quartz, Qct= chert, Pl= plagioclase, Fk= orthoclase, Lss= sandstone sedimentary lithic Lsl= sedimentary lithic mudstone, Lmm= moscovite metamorphic lithic, Lmb= biotite metamorphic lithic, Lmc=*

chlorite metamorphic lithic, Lma= amphibolitic metamorphic lithic, Lmn= gneissic metamorphic lithic, Lp= plutonic lithic, Lvf= felsic volcanic lithic, , Lvv= vitreous volcanic lithic, Msc= muscovite, Cl= chlorite, Px= pyroxene, Bt= Biotite, Hm= Heavy Minerals, Opaques, Qp2-3= Polycrystalline quartz 2-3 grains, Qp+3= Polycrystalline quartz >3 grains, Qn= non-ondulatory quartz, and Qond= ondulatory extension quartz.

3.2 Heavy minerals.

Sandstone samples were crushed, sieved and hydraulically concentrated in the <400 μm fraction. Subsequently, sodium polytungstate was used to obtained the >2.89 g/cc fraction. Grains were mounted using Meltmount ® resin with a refraction index of 1.539. Mineral identification of ca. 300 translucent grains was performed following the ribbon method (Mange, 1991). The results are presented in **Table 4**.

3.3 U-Pb Geochronology.

U-Pb LA-ICP-MS zircon geochronology was conducted at the Washington State University and at the University of Arizona following procedures presented by (Chang et al., 2006; Gehrels, 2009). Zircon crystals were extracted from samples by traditional methods of crushing and grinding, followed by separation with a Wilfley table, heavy liquids, and a Frantz magnetic separator. Samples were processed such that all zircons were retained in the final heavy mineral fraction. Zircons were mounted into an epoxy mount together with standard zircons. The mounts were sanded down to a depth of ~20 microns, polished, and cleaned prior to isotopic analysis.

In the case of the zircons recovered from magmatic rocks, the analyses were conducted at the zircon rims and cores to constrain the late zircon crystallization history (Valencia et al., 2005). In detrital samples, the cores of the grains were analyzed to avoid complex zircon histories (Gehrels et al., 2006). The results are presented in **Appendix 1**.

LA-ICP-MS isotopic analyses are affected by two forms of inter-element fractionation that must be corrected (Kosler and Sylvester, 2003). Uranium-lead data were reduced using Isoplot (Kosler and Sylvester, 2003). For all samples, probability plots and weight-average ages were obtained with ISOPLOT 3.62 (Ludwig, 2007).

4. CARTOGRAPHY AND FIELD RELATIONS.

Detailed fieldwork was performed within a reference area **(R.S.A)** on the flank of the Central Cordillera, in the limits between the states of Caldas and Antioquia (W=-75.42161, N=5.791360; W=-75.551283, N=5.721212), complemented by two regional (1:25000) E-W geological sections **(Figure 3 and Figure 4).**Geological mapping and cross-sections allow dividing the **R.S.A.** into four (4) main lithostratigraphic units: the middle grade metamorphic basement from the **C.C.**, the siliciclastic beds and associated volcanic rocks from the Abejorral Formation **(A.F.)**, volcano-sedimentary rocks from the **Q.G.C.** and a gabbroic plutonic body with associated basaltic rocks **(Figure 3).** The pre-Cretaceous metamorphic basement is represented by several NW trending belts exposed in the east and the middle segments of the study area **(Figure 3)**. They include (1) foliated quartz-feldspar gneisses with variable amounts of biotite and muscovite, (2) crenulated greenschist rocks with a penetrative foliation defined by chlorite and amphiboles and variable amounts of quartz and feldspar, and (3) crenulated muscovite + quartz + feldspar schists **(Figure 3)**.

Two different lithological associations from the **A.F.** were discriminated in the field: (1) quartz pebble conglomerates unconformably overlying the **C.C.**, intercalated with conglomeratic sandstones and mudstones, to be referred to as the Lower Abejorral Formation **(L.A.F)** and (2) a sequence of deformed mudstones interbedded with sandstones, black massive chert and andesitic porphyritic rocks overlaying the conglomerates, which will be referred to as the Upper Abejorral Formation **(U.A.F)**.

Mafic plutonic rocks outcrop in the west of the **R.S.A. (**

Figure 3). This unit corresponds to gabbroic rocks composed of pyroxene, amphibole, plagioclase and variable amounts of chlorite and epidote-replacing primary minerals. Texturally, the rock varies from fine grain to pegmatoid gabbro. Intrusive relations were identified with the metamorphic rocks from the **C.C.** and the **A.F.** The gabbroic rocks are thrust to the west over the volcanic rocks and associated mudstones of the **Q.G.C (**

Figure 3 and Figure 4).

Volcanic and sedimentary rocks from the **Q.G.C.** outcrop in the western the study area **(**

Figure 3). Volcanic rocks comprise a series of andesitic and basaltic lavas and pyroclastic rocks interbedded with mudstones and associated with thicker levels of lithic sandstones, breccias and matrix-supported conglomerates. A sequence of sandstones and mudstones with small lenses of coal was unconformably deposited on top of Quebradagrande strata **(**

Figure 3). These rocks are considered Oligocene in age and have been described as the Amaga Formation (Escobar, 1990; Schuler, 1984)**.**

Figure 3. Geological map from the reference study area **(R.S.A)**.

Figure 4. Cross-section from the reference study area and regional controlled 1:25000 cross sections.

5. STRUCTURAL GEOLOGY.

The map patterns and the geological profiles suggest that the main structure corresponds to an asymmetric positive flower structure with vergence to the west **(Figure 2 and**

Figure 3). The **A.F.** outcrops as a consistent NE belt, surrounded by metamorphic rocks from the **C.C.** with the same structural trend.

Three major deformational events were identified in the field: older metamorphic foliations that were well defined in the pre-Cretaceous basement (D1); inverted inherited structures and Cretaceous cover deformation in a positive flower (D2) and overimposed crenulations and tilting in the Oligocene units (D3).

D1 is recorded in the metamorphic rocks from the **C.C.** and includes the main metamorphic foliation S1 **(Figure 5).** The gneissic units exhibit a discontinuous foliation S1, with the eastern gneiss containing a S1 dipping SW and the western gneissic belt exhibiting a foliation S1 dipping NE **(Figure 5C).** Green and micaceous pelitic schists exhibit a S1 foliation defined by the alignment of amphiboles, chlorite and muscovite associated with small intrafolial folds (F1)**.** S1 is commonly transposed to S2 foliation **(Figure 5C)**.

D2 events produce the dominant structures in the **(R.S.A).** This deformation was observed in green and pelitic schists from **C.C.** and the sedimentary strata from **A.F.,** with structures including west verging asymmetric folds (F2) **(Figure 5O)** with rounded hinges dipping 40°-70° to the NW and the SE. The S2 foliation is developed axially planar to F2. Several inverse fault plane foliations, including the contact between the gabbroic rocks and the **Q.G.C.,** were observed parallel to the S2 and F2 axial planes **(Figure 5F, Figure 5G and Figure 5O)**. These faults with their associated S-C foliations **(Figure 4N)**, were observed in the **A.F.** and the metamorphic basement and show high dip angles and double vergence (**Figure 5D and Figure 5E)**.

D3 deformation was weakly developed in schists from Cajamarca complex and shales from **A.F.**, **Q.G.C.** and Amaga Fm. Those structures are characterized by locally developed cylindrical folds and crenulation (F3) with an associated discontinuous cleavage (S3). The bedding of the Quebradagrande rocks and the Oligocene cover is consistent with S3 and axially planar with F3 **(Figure 5A, Figure 5D, Figure 5E and Figure 5F)**.

Figure 5. (A), structural data from the Quebradagrande complex; (B), structural data from the gabbroic intrusive; (C), structural data from the **C.C.** gneissic units; (D), structural data

from the **C.C.** schists; (E), structural data from the **L.A.F.**; (F), Structural data from the Upper Abejorral Fm.; (G), metric west vergence S-C structures in mudstones from the **A.F.**.; (H), conglomerates without deformation in the lower Abejorral Fm.; (I), parallelized stratification and foliation within the upper Abejorral Fm.; (J), folded (F3) volcanic rocks from the **Q.G.C.**; (K), sedimentary breccias from the **Q.G.C.**; (L), interbedded volcanic rocks and mudstones from the Upper **A.F.**; (M), granitic rocks intruding rocks from the **A.F.** (N), centimeter west vergence S-C structures in mudstones from the **A.F.** (O), west vergence asymmetric west vergence folds in mudstones from the **A.F.**

6. STRATIGRAPHY.

Due to the discontinuous nature of the outcrops, six (6) stratigraphic segments were described **(Figure 6 and Figure 8),** and their interpretation was integrated with the cartographic observations. The described facies are presented in **Table *1***.

The stratigraphy of the Cretaceous rocks from other segments of the Central Cordillera is presented for a regional comparison (Gomez, 1995; Gonzalez, 1980a; Maya and Gonzales, 1995; Quiroz, 2005).

Facies name and code	Lithology and structures	Interpretation
Facies 1: Conglomeratic and sandy dominated units		
F1.1	Matrix supported massive conglomerates.	Fast deposition, proximal fan deltas
F1.2	Massive conglomeratic sandstones.	Fast deposition, fan delta sandy flows
F1.3	Disorganized sedimentary breccias and conglomeratic sandstones.	Proximal marine debris flows

F1.4	Conglomeratic sandstones interbedded with black mudstones	Coarse sediments deposited in sandy lobe.
Facies 2: mud dominated units		
F2.1	Laminated black mudstones, no bioturbation.	Low energy suspension fallout in absence of currents
F2.2	Laminated black mudstones with lenticular levels of chert and lidites.	hemipelagic sedimentation
F2.3	Laminated black mudstones interdigitated with fine and medium grain sandstones.	Mud-dominated sequence deposited in distal lobes

Table 1. Sedimentary facies.

6.1 Lower Abejorral Formation (L.A.F).

Two stratigraphic segments were described (sections 6 and 10, **Figure 6**) and included as the **L.A.F.**

Figure 6. Stratigraphic sections (6 and 10) and provenance data (petrography, heavy minerals, clast counting and U-Pb detrital zircons) from the **L.A.F.**

These units unconformably overlay the metamorphic basement from the **C.C.** It is composed of 0.5 m to 3 m tabular beds of poorly sorted, pebble-sized, rounded clasts and oligomictic quartz conglomerates supported in a medium-grain sandy matrix and characterized by the lack of internal structures (F1.1). These rocks are interbedded with tabular beds of poorly selected and coarse-grained conglomeratic quartz sandstones (Facies F1.2.)**,** intercalated with beds of gray mudstones (Facies F2.1.; **Figure 6)**.

6.2 Upper Abejorral Fm. (U.A.F).

Cartographic observations indicate that a sequence of mudstones, sandstones, polymictic conglomerates and chert overlays the **L.A.F.** Three different stratigraphic segments were analyzed for this unit (sections 8, 9 and 11 of).

This sequence is mainly composed of lenticular and tabular beds of black mudstones that are several meters thick (>3 m) with planar lamination and an absence of biogenic activity (F2.1). Mud-dominated sequences are interbedded with thin levels of medium to fine-grain sandstones, composed of rounded fragments and supported by a clay matrix. These thin sandstone levels (<10 cm) are slightly laminated, exhibiting lenticular geometries and interdigitated contacts with the mudstones **(**F2.3; **Figure 5I),** followed by mud sequences interbedded with metric levels (1-5 m) of tabular beds of black chert and lidites (F2.2).

Figure 7. Stratigraphic sections (9, 8 and 11) and provenance data (petrography, heavy minerals, clast counting and U-Pb detrital zircons) from the **U.A.F.**

West of the **R.S.A.** appears a sequence overthrust by gneissic rocks from the **C.C.** **(Figure 7,** section 11**).** This stratigraphic segment starts with poorly selected subangular polymictic conglomerates with medium-grain sandy matrix and lack of internal structures (F1.3), followed by deformed and foliated black shales (F2.1) interbedded with beds of black chert and lidites at the top (F2.2). These units could not be structurally correlated with the sequences from the east of the study area. However, petrofacies analysis **(chapter 8)** suggests that this sequence may be related to the **U.A.F.**

6.3 Quebradagrande Complex (Q.G.C).

One (1) stratigraphic segment of sedimentary rocks included within the described in the west of the R.S.A along the Campanas creek **(Figure 3)**. This sequence is composed of metric (0.1– 3 m) tabular beds of massive coarse-grain and fine-grain conglomeratic sandstones in a silty matrix interbedded with centimetric beds of laminated black and gray mudstones (F1.4; **Figure 8**).

Figure 8. Stratigraphic section (section 7) and provenance data (petrography, heavy minerals, clast counting and U-Pb detrital zircons) from Quebradagrande sedimentary member.

Associated with the conglomeratic sandstones are interbedded metric beds (1-15 m) of clast-supported lithic sedimentary breccias with very angular fragments and sizes ranging between 1 and 40 cm, embedded in a fine-grain sandy matrix **(Figure 5K)**.

These levels are characterized by a lack of internal structures **(Figure 8**; Facies F1.3**)**.

Figure 9. (A), Sandstone classification after Folk (1980); (B), quartz classification after Basu et al. (1975); (C), Heavy minerals from the **L.A.F.,** sample SZ-009e. Msc=muscovite, Zr=Zircon and Sta=Staurolite; (D), heavy minerals from the **U.A.F.**, sample SZ-027. Tu=Tourmaline and Hb= Hornblende; €, polarized thin section from the **L.A.F.**, sample Ap-009e. Lm= metamorphic lithic and Qm= monocrystalline quartz; (F), polarized thin section from the **U.A.F.**, sample SZ-027. Lv= volcanic lithic and Px= pyroxene.

6.4 Conglomerate clast counting.

Clast counting was performed in three different localities from the **L.A.F.**, the **U.A.F.** and the **Q.G.C.** (**Figure 6, and Figure 8;**

	Quartz (%)	Sandstones (%)	Mudstones (%)	Chert (%)	Metamorphic (%)	Plutonic (%)	Volcanic (%)
L.A.F.	85	0	14	0	0	0	0
U.A.F.	33	16	16	0	25	2	9
Q.G.C.	6	45	5	26	1	0	17

Table 2).

The **L.A.F.** includes pebble sized rounded conglomerates composed of mudstones (15%) and milky quartz (85%). The composition of the **U.A.F.** conglomerates includes sandstones (16%), metamorphic (25%) micaceous schists, gneissic fragments, and intermediated volcanic-plutonic clasts (11%). Finally, the angular massive breccias from the **Q.G.C** include high contents of sandstones, chert and volcanic fragments (45%, 26% and 17%) and are low in quartz, metamorphic and mudstone fragments (6%, 1% and 5%).

	Quartz (%)	Sandstones (%)	Mudstones (%)	Chert (%)	Metamorphic (%)	Plutonic (%)	Volcanic (%)

L.A.F.	85	0	14	0	0	0	0
U.A.F.	33	16	16	0	25	2	9
Q.G.C.	6	45	5	26	1	0	17

Table 2. The results of conglomerate clast counting analysis.

6.5 Sandstone petrography and heavy minerals.

Sandstones from the **L.A.F.** are medium to coarse-grained, with angular to sub-angular grains that are poorly to very poorly sorted within a clay matrix (5-15%). Compositionally, the samples are classified as a quartz-arenite **(Figure 9A and Figure 19E**). Lithics include micaceous mineral (muscovite, biotite and chlorite; 7-23%) and high contents of mono-crystalline quartz and polycrystalline quartz (>80%). Based on the amount of quartz crystals, we used a high-resolution technique based on textural parameters to differentiate the quartz provenance. The results suggest low-grade metamorphic source (Basu et al., 1975; Tortosa et al., 1991).

Sandstones from the **U.A.F.** are fine to medium-grain, with rounded to sub-rounded grains that are well sorted within a clay matrix (≤15%) (**Figure 9A and Figure 9**. Compositionally, these samples include sedimentary lithics (quartz-arenites and mudstones, 0 - 15%), metamorphic lithics (micaceous schists and gneisses, 8-30%) and a relatively lower quartz content (50 – 80%). Following Basu et al. (1975), the quartz fragments come from metamorphic and plutonic sources **(Figure 6 and Figure 9.**

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	SZ-027	SZ-009F2	SZ-009A	AP-005	SZ-009e	SZ-022	SZ-009h	AP-034	AP-036
Qm (%)	51.1	39.5	39.9	60.7	69.8	59.9	43.2	32.5	27.7
Qsed (%)	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.9	0.9
Qpd (%)	7.7	2.0	1.1	5.1	3.1	1.0	3.7	18.8	17.9
Qpf (%)	0.0	0.0	0.0	1.0	1.2	0.0	0.0	3.4	8.0
QPOli (%)	22.4	24.8	24.8	11.5	18.2	1.4	17.6	13.7	10.7
QCt (%)	2.6	26.1	15.1	1.7	2.7	0.0	11.5	19.7	7.1

Pl (%)	0.4	0.0	0.0	0.0	0.0	0.0	0.3	0.9	2.7
F (%)	0.0	0.0	2.8	3.4	0.4	0.3	0.0	0.0	0.0
Lss (%)	1.1	0.0	0.0	1.4	0.0	0.0	0.0	7.7	13.4
Lsl (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	1.8
Lmm (%)	0.7	0.0	0.0	5.1	0.0	1.7	0.0	0.0	7.1
Lmg (%)	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.9
Lmb (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0
Lmc (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	4.5
Lma (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0
Lmn (%)	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Lp (%)	0.7	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.9
Lvf (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
Lvv (%)	1.8	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0
Lvi (%)	1.5	0.0	0.0	0.0	0.0	0.0	0.0	2.6	4.5
Msc (%)	6.6	5.6	16.2	11.5	4.7	26.0	12.5	0.9	0.0
Cl (%)	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	3.6
PX (%)	1.5	0.0	0.3	0.3	0.4	1.7	0.0	0.0	0.0
Bt (%)	5.9	2.0	0.0	0.0	0.0	7.2	10.1	1.7	0.0
Hm (%)	0.0	0.0	0.9	1.0	0.0	1.0	0.7	0.0	0.0
Op (%)	0.0	2.0	0.0	0.3	0.0	0.0	1.7	0.0	0.0
high resolution quartz analyses Basu et al., (1975)									
Qp2-3 (%)	12.5	16.0	14.0	5.4	8.5	0.7	14.9	0.9	4.5
Qp+3 (%)	20.2	35.0	25.9	13.6	17.4	2.4	17.6	53.8	46.4
Qn (%)	33.1	28.4	18.8	21.0	27.5	52.1	26.0	13.7	8.9
Qond (%)	17.3	12.1	21.7	39.0	41.9	8.6	17.6	19.7	19.6

Table 3. *Sandstone framework analysis. Qm= monocrystalline quartz, Qsed= Polycrystalline sedimentary quartz, Qpd= Polycrystalline diffuse quartz, Qpf= polycrystalline foliated quartz, Qct= chert, Pl= plagioclase, Fk= orthoclase, Lss= sandstone sedimentary lithic Lsl= sedimentary lithic mudstone, Lmm= moscovite metamorphic lithic, Lmb= biotite metamorphic lithic, Lmc= chlorite metamorphic lithic, Lma= amphibolitic metamorphic lithic, Lmn= gneissic metamorphic lithic, Lp= plutonic lithic, Lvf= felsic volcanic lithic, , Lvv= vitreous volcanic lithic, Msc= muscovite, Cl= chlorite, Px= pyroxene, Bt= Biotite, Hm= Heavy Minerals, Opaques, Qp2-3= Polycrystalline quartz 2-3 grains, Qp+3= Polycrystalline quartz >3 grains, Qn= non-ondulatory quartz, and Qond= ondulatory* extension quartz.

Heavy minerals from the **L.A.F.** are compose by ultrastable minerals: such as zircon (10-30%), rutile (0-6%) and tourmaline (0-32%); stable minerals such as muscovite (6-50%), apatite (0-11%), sillimanite–staurollite (0-4%), biotite (3-13%) and chlorite (0-10%); and unstable minerals such as amphibole (4-24%) and pyroxenes (0-10%**; and Figure 9C).** Samples from the **U.A.F.** are composed of ultrastable minerals such as zircon (11-26%),, rutile (0-7%) and tourmaline (0-40%); stable minerals such as apatite (0-22%), muscovite (2-45%), sillimanite –staurollite (0-4%), biotite (8-40%) and chlorite (0-9%); and unstable minerals including amphibole (0-3%) and pyroxenes (3-9%; **Figure 6 and Figure 9D**, **Table 4).**

Sample	Zircon (%)	Muscovite (%)	Apatite (%)	Rutile (%)	Estaurolite - Sillimanite (%)	Biotite (%)	Chlorite (%)	Amphibole (%)	Tourmaline (%)	Piroxene (%)	others (%)
PAN 2	19	18	11	1	2	7	10	9	16	5	1
SZ-009e	10	49	13	6	0	4	0	6	9	2	2
SZ-009f	34	24	4	0	1	3	0	24	0	10	1
SZ-009h	29	6	0	6	4	13	1	4	32	0	4
AP-001	24	32	2	5	3	13	0	3	13	1	6
AP-033	12	45	13	1	1	8	0	1	1	3	16
AP-036	25	34	22	3	0	6	1	2	3	3	1
PAN 1	15	29	0	0	3	20	0	3	23	3	2
SZ-022	19	5	9	7	2	19	0	1	28	9	1
SZ-027	7	2	1	1	1	39	0	3	41	5	0

Table 4. The results of heavy mineral analysis.

7. U-Pb GEOCHRONOLOGY.

The results and the associated 1 sigma errors are presented in **Appendix 1**. The maximum depositional ages (MDA) were calculated using a weighted average age between the youngest zircons (at least two grains), and the age peak populations were extracted using a probability density plot. We choose this methodology over other proposed methods (Gehrels et al., 2006) because the complementary techniques allow us an accurate assessment of the minor populations.

7.1 Lower Abejorral Fm.

U-Pb data obtained from the **L.A.F.** includes three (3) detrital samples from quartz conglomeratic sandstones and quartz conglomerates **(Figure 2)**.

Sample Pan-1 exhibits an MDA= 126.3 +/- 2 and a major Triassic population (241 ma). Less abundant zircons define Jurassic (156 Ma), Paleozoic (537 Ma) and Mesoproterozoic age populations (1006.5 and 1189.5 Ma). Sample MQA-4A exhibits an MDA= 234.7 +/- 5.1. This sample yields a major Triassic age population (239.75 Ma) and minor Neoproterozoic–Paleozoic (533.75 and 775.25 Ma), Mesoproterozoic (1037.75 Ma) and older Paleoproterozoic populations (1708 and 2156 Ma). Sample SZ-008 exhibits an MDA= 236+/- 3.45 ma. The sample is characterized by a major Permian population (275.8 Ma) with minor Mesoproterozoic-Neoproterozoic age populations (954.8 and 1167.6 Ma**; Figure 10)**.

Figure 10. U-Pb detrital ages acquired for samples from the **L.A.F.**

7.2 Upper Abejorral Fm.

Zircons from three (3) detrital samples collected in the **R.S.A.** were analyzed. The samples correspond to lithic medium grain sandstones interbedded with associated mudstones from the **U.A.F (**

Figure 11).

Sample AP-33 exhibits an MDA= 123.5 +/- 2.3, yielding major Lower (126.8 Ma) and Paleozoic detrital zircon age populations (462.8 and 512.2 minor Grenvillian (1051.7 and 1205.1 Ma) and older Paleoproterozoic (1846 Ma). Sample Pan-2 exhibits an MDA= 103.9 +/- 2.8, showing major Albian (103.5 Ma), Permo-Triassic (249 Ma) and Paleozoic populations (535.5 Ma) with minor Mesoproterozoic (1062 ma) and reworked older Paleoproterozoic and Mesoproterozoic populations (1225.5 and 1759.5 Ma).

Sample SZ-023 exhibits an MDA= 104.3 +/- 2.2 Ma, yielding major Aptian-Albian (105 ma), Permo-Triassic (271.25 Ma) and Paleozoic populations (519.75 Ma) with minor Mesoproterozoic (1162 Ma) and older Paleoproterozoic and Archean age populations (1764 and 3122 Ma; **Figure 11)**.

Figure 11. U-Pb detrital ages acquired for samples from the Upper Abejorral Fm. Detrital populations and concordia plots are presented for each sample.

7.3 U-Pb geochronology of volcanic and plutonic rocks associated with the U.A.F.

The weight-average ages were calculated from volcanic and plutonic rocks. Zircons were collected from three (3) andesitic lavas and two (2) intrusive rocks **(Figure 2)** from the **U.A.F (Figure 5M and Figure 12)**. Sample SZ-012 corresponds to an andesitic volcanic rock associated with mudstones from the **U.A.F.** and zircons yielding an age of 102 +/- 1.1 ma. Th/U relations range between 0.2 and 0.6, which is characteristic of magma-derived zircons. Sample SZ-018 corresponds to andesitic porphyritic rocks interbedded with mudstones of the **U.A.F.**, yielding an age of 112.3 +/- 7.7 ma. These two samples present Proterozoic and Paleozoic zircon heritages and Th/U relations that range between 0.05 and 0.9 **(Figure 5L)**; Sample SZ-011 is a weathered sample that preserves igneous porphyritic textures. It yields a U-Pb zircon age of 103 +/- 1.8 ma. Th/U relations range between 0.2 and 0.7. Sample DM-056 corresponds to granitic dikes with intruding mudstones from the **U.A.F.**, yielding a U-Pb zircon age of 97.43 +/- 0.75 ma, Th/U relations range between 0.4 and 1.6. Finally, sample SZ-064 corresponds to andesitic sills with intruding mudstones from the **U.A.F.** It presents Th/U relations ranging between 0.2 and 0.7 and is characterized by a U-Pb zircon age of 60.43 +/- 0.29 ma.

Figure 12. U-Pb weighted mean average ages acquired from volcanic rocks within the Upper Abejorral Fm. Age plots and concordia plots are presented for each sample.

7.4 Quebradagrande complex.

Sample JPC-13 corresponds to andesitic lavas within the **Q.G.C. (Figure 2)** and yield an age of 83.2 +/- 0.68 ma, with Th/U relations ranging between 0.3 and 2.1. Sample JPC-008 corresponds to sandstones associated with the **Q.G.C.**, exhibiting a maximum depositional age of 84 +/- 0.51 ma. Detrital zircon populations range between 80 ma to 2700 ma, with major age peaks at 81.2 ma, 239.4 ma, and 261.8 ma and a less representative age peak at 1016.4 ma **(**

Figure 13).

Figure 13. U-Pb weighted mean average ages acquired from volcanic rocks of the Quebradagrande complex. Average ages and concordia plots are presented for each sample.

7.5 U-Pb geochronology from the pre-cretaceous basement.

To characterize the different basements located west of the Silvia Pijao fault, we obtained U-Pb ages from the Cambumbia stock and from the Pacora stock.

Figure 14. U-Pb ages acquired from the central cordillera basement. Detrital populations and concordia plots are presented for each sample.

Zircons from the sample SG-057 corresponds to a granitic rock slightly foliated, from the unit described as the Pacora Stock (Gonzalez, 1988). The zircons yielded an age of 257.9 +/- 9.9 Ma, with Th/U relations ranging between 0.2 and 0.7 **(Figure 14)**.

Zircons from the sample SG-013 corresponds to a quartz feldspar foliated rocks from the Cambumbia Stock (Gonzalez, 1988) zircons yielded an age of 232.5 +/- 1,4 Ma, with Th/U relations are ranging between 0.2 and 0.7 **(Figure 14)**.

8 DISCUSSION

8.1 Depositional environment and regional correlations of the stratigraphic units.

Based on the poor selection and the limited presence of structures on the coarse-grain units, we interpreted the basal oligomictic conglomerates and interbedded laminated mudstones and sandstones from the **L.A.F.** (F1.1 and F1.2) as gravity flows and suspension sedimentation deposited in fan deltas close to the continental margin. Laminated mudstones (F2.1) can be associated with a suspension deposition associated with turbidite flows, whereas facies F2.3 corresponds to a mud-dominated sequence interbedded with thin beds of fine grain sandstones deposited in distal lobes. Finally, laminated mudstones and interbedded chert (F2.2) were deposited in hemipelagic conditions. The absence of biturbation suggests anoxic basins. This unit has an accumulation age between 130 – 100 Ma, as suggested by the maximum depositional ages (**Figure 10**) and the age of the overlaying volcanic rocks in the U.A.F.

Facies association and reported fossils from the **U.A.F.** suggest a distal depositional environment. This grain-decreasing stacking pattern is related to transgressive environment during deposition. U-Pb data from the **U.A.F.** Albian (110-100 ma) depositional age, as suggested by the maximum age inferred from the detrital zircons and the age of the interbedded volcanic rocks **(**

Figure 11 and

Figure 13). These ages are consistent with the paleontological characteristics of this unit (Gonzalez, 1980a; Rodriguez and Rojas, 1985).

The lack of structures and poor sorting within the disorganized conglomeratic (F1.3) from the **Q.G.C.** suggests that this sequence corresponds to debris flows deposited in a marine setting. Massive sandstones and laminated (F1.4) may be deposited by proximal sandy lobes. New results presented in contribution suggest that the **Q.G.C** was deposited after 84 +/- 0.51 ma, as suggested by the **M.D.A** and results from the associated volcanic rocks (83 +/- 0.6 ma;

Figure 13)**.** This accumulation age is similar to fossil ages reported for the **Q.G.C.** north of the study area.

Figure 15. Stratigraphic columns showing a grain decreasing stacking pattern for the Abejorral Fm. and the correlated Aranzazu metasedementary complex.

The stratigraphy and provenance of several stratigraphic sections, including in the Abejorral and Aranzazu metasedimentary complex north and south of the study, have been previously analyzed (Gomez, 1995; Gonzalez, 1980a; Quiroz, 2005). We discussed them to correlate and compare with the stratigraphic observations in the study area **(**

Figure 15). Their stratigraphic record includes basal oligomictic quartz conglomerates that lack structures and presents thicknesses ranging between 40 – 240 m. Overlaying the conglomerates are sequences of mudstones interbedded with lidites, chert, fine sandstones and occasionally polymictic conglomerates, with thicknesses that vary between 160 and 1910 m.

Their stratigraphic and composition record is similar to that discussed in the study area. The U-Pb detrital zircon geochronological constraints from the Abejorral formation record an Aptian-Albian (110 – 100 ma) **M.D.A.**, whereas ammonites from this section also confirmed their Aptian-Albian depositional age (Burgl and Radelli, 1962).

Based on the stratigraphic and fossil, record several depositional environments were assigned for the basal conglomerates, including alluvial fans, fan deltas and beach faces, whereas the upper segment apparently accumulated during the Lower Cretaceous (Aptian-Albian), with a deeper marine environment (Quiroz, 2005; Rodriguez and Rojas, 1985) demonstrating the existence of a regional transgressive behavior in the Early Cretaceous accumulation pattern on the western flank of the Central Cordillera.

Although not defined in the study area, some authors have described farther south that the accumulation of the clastic sequences in the Central Cordillera may be as old as the Berrasian (Moreno-Sánchez et al., 2008; Rodriguez and Rojas, 1985). Such a unit, named the Valle Alto Formation (Gonzalez, 1976; Gonzalez, 1988) includes plant remnants and has also been related to a continental margin environment (Quiroz, 2005; Rodriguez and Rojas, 1985).

8.2 Regional correlations of the stratigraphic units.

The Abejorral Fm. was defined as a clastic sequence compose by basal conglomerates and associated mudstones deposited simultaneously with the volcanic and sedimentary rocks from the **Q.G.C.** (Gonzalez, 1980a; Spikings et al., 2014b; Villagómez and Spikings, 2013), the differentiation between these units were performed based on: (1) the stratigraphic associations, basal quartz conglomerates and sandstones characteristic from the Abejorral Fm.; (2), structural position, the Abejorral Fm. is located east of the **S.J.F.S**. And overlaid continental rocks from the Cajamarca complex and (3), the absence of associated volcanism within the Abejorral Fm. (Burgl and Radelli, 1962; Gonzalez, 1980a; Lozano et al., 1975; Maya and Gonzales, 1995; Toussaint, 1996).

The results presented in this contribution include zircon U-Pb data from the **Q.G.C.** yield 83 +/- 0,68 ma from the volcanic rocks and maximum depositional age of 83 +/- 0,6 ma. Those Santonian - Campanian ages are younger than the reported Albian ages (Gonzalez, 1980a; Toussaint and Restrepo, 1978; Villagomez et al., 2011). Stratigraphic constrains in the **U.A.F.** contains volcanic rocks and late intrusives, U-Pb ages obtained from the sandstones and the associated volcanic rocks are consistent with the reported Aptian-Albian (Gomez, 1995).

These results suggest the existence of at least two different Cretaceous volcano-sedimentary sequences on the western flank of the Central Cordillera. We propose that the Aptian-Albian ages from the **Q.G.C.** are associated with the volcanic rocks from the **U.A.F.**, younger volcano-sedimentary sequences (Santonian-Campanian) located west San Jeronimo fault, has more affinity with the sequences defined as the **Q.G.C.** (Botero, 1963; Maya and Gonzales, 1995; Nivia et al., 2006).

8.3 Provenance.

The presence of schist and gneissic lithic fragments and milky quart, together with foliated polycrystalline quartz and undulatory monocrystalline quartz, is characteristic of a major metamorphic source for both the **L.A.F** and **U.A.F**. Heavy minerals such as staurolite, sillimanite and muscovite suggest that this metamorphic basement corresponds to a metasedimentary middle to high-grade metamorphic source and/or per-aluminous granitoids. Within the Basu et al. (1975) quartz discrimination scheme, the samples indicate a major low-grade metamorphic source **(Figure 9)**.

In contrast with the **L.A.F.**, the **U.A.F.** is characterized by a relative decrease in the quartz sources (50–80%), the apparition of plutonic and volcanic lithic sources (4-8%), and an increase in sandstone clasts (16%). Such a record, together with the presence of the Aptian-Albian (130-100 Ma) detrital zircon age population, suggests that volcanic activity, exhumation and reworking of the sedimentary cover took place during the accumulation of the **U.A.F.**

The metamorphic sources may be related to the crystalline massifs limiting the basins. The U-Pb detrital zircon ages of Permian to Triassic in age and possibly the Devonian ages are characteristic of the dated bodies in the study area and the main basement of the Central Cordillera exposed in the eastern limit of the **A.F.** (Cochrane et al., 2014a; Villagómez et al., 2011; Vinasco et al., 2006).

Several age populations including Mesoproterozoic to Neoproterozoic (1250 – 800 Ma) Grenvillian ages, 350-800 Ma and older than 1250 Ma age populations, are comparable in age with sources in the Grenvillian age massifs that are exposed on the eastern segment of the Colombian Andes (Cardona et al., 2006; Cordani et al., 2005; Cordani et al., 2010; Ordóñez-Carmona et al., 2006), the Eastern Colombian basement rocks (Horton et al., 2010; Van der Lelij et al., 2015), and distal regions in the Amazon Craton (Cordani et al., 2009; Tassinari et al., 1996; Tassinari and Macambira, 1999; Weber et al., 2009). However, such older ages are comparable to inherited and protolith zircon ages from the Triassic granitoid and metamorphic rocks from the dated basement units and the metamorphic basement of the Central Cordillera (Cochrane et al., 2014a; Martens et al., 2014; Villagómez et al., 2011; Vinasco et al., 2006).

The Jurassic zircon age population of ca. 156 Ma, although not widely represented, is similar to magmatic ages on the volcanic and plutonic arc rocks exposed on the eastern flank of the Central Cordillera (Bustamante et al., 2010; Leal-Mejia, 2011; Villagomez et al., 2011) and suggest that basin filling was also connected to the erosion of a former Late Jurassic arc.

As already mentioned, Lower Cretaceous detrital zircons and possibly some of the volcanic lithics are related to volcanic activity contemporaneous with the basin filling.

In the case of the **Q.G.C.**, the mix provenance, including sedimentary, volcanic and plutonic sources, together with detrital zircons of Permo-Triassic and Late Cretaceous age, suggests that a continental source with ages similar to the adjacent massifs and the main Central Cordillera, as well as the main Late Cretaceous arc, sourced the basin. Such a provenance also suggests that the arc was built in a continental crust.

8.4 Tectonic evolution.

8.4.1 Lower Cretaceous extension (140-100 Ma).

Detailed mapping in the **R.S.A**, shows a double vergence positive flower structure, which includes vertical reverse faults (50-90°), interpreted as inversion faults. These structures have been widely described in inverted extensional basins in the northern

Andes (Branquet et al., 2002; Horton et al., 2010; Mora et al., 2010; Mora et al., 2006).

Other elements that reinforced the interpretation of the tectonic evolution of this segment of the continental margin as an extensional margin includes: The spatial distribution of the geological units follows a strip pattern, where the Cretaceous basement alternates with the Cretaceous **A.F.**, and in the west, it also limits the **Q.G.C**.

The pre-Cretaceous basement includes similar Permo-Triassic plutonic rocks with associated metasedimentary units. The western belt **(**west of the **S.P.F.S.)** includes the Pueblito Diorite, Amaga Stock, Chinchina Gneiss and Pacora Stock (Cochrane et al., 2014a; Vinasco et al., 2006); This contribution), as well an eastern belt **(**east of the **S.J.F.S.)** that has been widely described as part of the pre-Cretaceous basement of the Central Cordillera (Cochrane, 2013; Martens et al., 2014; Villagomez et al., 2011; Vinasco et al., 2006). The correlation of these basement units separated by the **A.F.** and the **Q.G.C.** suggest that that the basement was formerly continuous and was segmented by an extensional event **(Figure 16 and Figure 17)**.

The two stratigraphic segments identified in the **A.F.** that followed a transgressive trend can be related to two different stages during the opening of an extensional basin. (1) The basal conglomerates from the **L.A.F.** can be associated with a "rift initiation stage" (Prosser, 1993), in which proximal coarse facies are deposited related to new depocenters generated by the extension of the continental crust. The provenance results suggest source areas that can be related to the adjacent basement and depositional ages from 120 to 110 ma. (2) The more distal deep marine and volcanic rocks from the **U.A.F.** are interpreted as the result of continuous basin subsidence and sea floor spreading, generated during the maximum extension or in a "rift climax stage" (Prosser, 1993). The observed asymmetric configuration of the inherited inverted structures (the west vergent flower structure) and the transgressive sedimentary covers are characteristic of basins generated in more transtensional settings that contrast with the more symmetric basins typical of back arc basins and orthogonal extension (Busby, 2012).

The similarity of the accumulation ages to the volcanic crystallization ages in the **U.A.F.** suggest that the volcanism and sedimentation were contemporaneous with the major transgressive and subsidence phases of the extensional basin.

Older fossil remnants of Berrasian ages in the clastic sequences of the Valle Alto Formation (Etayo, 1985; Quiroz, 2005; Rodriguez, 1985) suggest that the extensional basin began to grow in the beginning of the Early Cretaceous and continued until the Aptian-Albian, when it reached its maximum.

The presence of volcanic rocks, including mafic dikes and volcanic flows, and granitic intrusives and the presence between the rifted blocks west of the **S.P.F.S.** and the reference basement east of the **S.J.F.S.** of several ultramafic rocks, pillow basalts and gabbroic rocks (González, 1980; Alvarez, 1987) represent the vestiges of the new oceanic crust formed following the main rifting events. MORB related gabbroic and basaltic rocks are reported close to the **S.J.F.S.** (Villagomez et al., 2011) that may be related to this record**.** We suggest that these units were generated between 110 and 100 Ma. However, more detailed constraints of the magmatic rocks are necessary to appropriately discriminate their tectonic environment.

The apparent eastern position of the former Jurassic volcanic arc that experienced a major decrease in its magmatic activity in the Late Jurassic-Early Cretaceous (Bustamante et al., 2010; Leal-Mejia, 2011; Spikings et al., 2014a; Villagomez et al., 2011; Villagómez and Spikings,) suggests that basin formation and extension took place in the fore-arc.

Several mechanisms may be responsible for this change to the transtensional tectonics (140 – 100 Ma), including changes in the convergence vector between the Farallones plate and the South American margin, associated with major plate motion, and rotations associated with the opening of the Equatorial and South

Atlantic Oceans (Gradstein et al., 2004; Moulin et al., 2010). Alternatively, a decrease in the subduction velocity may be responsible for the trench retreat and the formation of marginal basins, causing the detachment of microcontinents and the formation of the oceanic crust in the fore arc (Rey and Müller, 2010).

Figure 16. Conceptual tectonic model illustrating the evolution of northwestern South America in the Cretaceous (140 ma – 65 ma).

Figure 17. Schematic cross sections and tectonic evolution for the northern Andes during the Cretaceous (140 ma – 65 ma).

The proposed 140- 100 ma interval for an extensional dominate margin contrasts with a former model that suggests that the Central Cordillera was uplifted in the Early Cretaceous as a consequence of the accretion of allochthonous terranes (Cediel et al., 2003; Villagómez and Spikings, 2013; Villagómez et al., 2011). This interpretation was based on the correlation of a regional scale thermal event, linked to the fast cooling caused by compressional exhumation. However, we propose that this cooling/exhumation event is related to crustal thinning and basement exhumation during the extension.

Within this context, the Early Cretaceous argon cooling ages of the high and medium-pressure rocks included in the Arquía Complex that have been related to subduction and/or collision (Bustamante et al., 2011a; Bustamante et al., 2011b; Cristina., 2014) may be related to cooling and exhumation within the extensional setting (Fassoulas et al., 1994).

8.4.2 Paleogeography of the Cretaceous extensional basin.

Several authors have proposed that tectonic blocks from the Central Cordillera originated in a more southern position during the Lower Cretaceous. These ideas are based on regional correlations, provenance data and paleomagnetism (Bayona et al., 2006b; Lamus Ochoa et al., 2013; Pindell, 2009; Pindell et al., 2005). We followed these suggestions and proposed that the transtensional tectonics were responsible for the translation of these blocks to more northern positions. These paleogeographic assumptions imply that the Lower Cretaceous sedimentation in the Central Cordillera was disconnected from the Eastern Cordillera and that those sequences were deposited in different paleotectonic settings, including an active transtensive margin that evolved to a passive margin related to the opening of the Proto-Caribbean (Horton et al., 2010; Mora et al., 2006; Pindell, 2009; Pindell et al., 2005).

8.4.3 Arc re-initiation and growth of multiple arcs.

As already discussed, during the Early Cretaceous, a new oceanic basin was formed due to a major extensional event in the continental margin **(Figure 16 and Figure 17).** After 100 Ma, a major change in convergence took place, resulting in the formation of at least two different subduction zones.

The results presented here suggest that volcanic rocks from the **Q.G.C.** are as young as 85 Ma, and due to their basalt to dacite compositions, they can be considered as associated to a magmatic arc formed over a microcontinental fragment detached from the margin during the extensional event that formed the new oceanic crust.

U-Pb detrital zircons from sedimentary rocks associated with the volcanics of the **Q.G.C.** suggest pre-Cretaceous continental margin sources, implying that the volcanic arc was constructed over the continental crust. This crust was rifted as a microcontinent from the continental margin and separated by a newly formed ocean **(Figure 16 and Figure 17)**.

The other rocks include Upper Cretaceous plutonic rocks from the Central cordillera such as the Antioquia batholith (95-85 Ma), San Diego stock (94 ± 0.9), Altavista stock (96±0.39 and 87±0.53 Ma) and other small granitic pluton units, which clearly intrude into the Cretaceous deformed covers and the pre-Cretaceous basement east of the **S.J.F.S.** (Correa et al., 2006; Villagomez et al., 2011).

These two arc units are separated by the major regional faults of the **S.J.F.S.** and several ultramafic bodies, suggesting that they are unrelated and represent at least two different subduction zones installed during 80 and 100 ma, **(Figure 16 and Figure 17)**.

The formation of these two subduction zones may be related to a change from extension to compression in the subduction system. This change is consistent with the onset of compressional setting in the South American continental margin (Fildani et al., 2003; Ramos, 2010b) and may be related to a global plate reorganization event between 105 – 100 ma associated with the ending of the Godwana Subduction Zone (Matthews et al., 2012).

8.4.4 Plateau arrival and tectonic inversion.

Structural analysis suggests the existence of a major deformational phase (D2) identified in the basement and the Abejorral Fm. and overthrust rocks from the **Q.G.C.** This event is related to the arrival of the Western Cordillera allochthonous terrane and para-autochthonous rifted blocks **(Figure 16 and Figure 17)**. These allochthonous terranes include a Lower Cretaceous oceanic plateau and related upper Cretaceous volcanic arc (Spikings et al.; Vallejo et al., 2006; Van der Lelij et al., 2010; Villagómez et al., 2011; Gonzalez, 2001; Hastie and Kerr, 2010; Kerr et al., 1997).

The arrival of an allochthonous oceanic plateau to an extended margin composed of several extended blocks implies that these exotic terranes experienced several collisional events with the extended blocks prior to the final collision with the continental margin.

Nevertheless, the timing of these collisional events are poorly constrained and obscure. During the Paleogene, several postcollisional plutonic rocks intruded into the Central Cordillera. These units originated from subduction reversal and the activity of a single continental volcanic arc.

The Oligocene Amaga Formation that overlaid the **Q.G.C.** and several undeformed granitic and volcanic rocks are intruding the Cretaceous units. The younger intrusives correspond to Paleocene (60.3 +/- 0.29) andesitic rock. We consider that this volcanism represents the minimum age for the inversion of these basins, suggesting that this event took place between 80 – 60 ma. Analytical constraints and regional data (Bayona et al., 2012; Cardona et al., 2012; Cardona et al., 2011b; Cochrane et al., 2011; Pindell et al., 2005; Spikings et al., 2014a; Villagómez and Spikings, 2013; Villagómez et al., 2011; Weber et al., 2010) also suggest that these compressional tectonics related to the collision of the western cordillera took place during the Late Cretaceous (80 – 65 ma).

After the subduction reiniciation and collision of the western cordillera oceanic plateau with the South-America continental margin, the Northern Andes was affected by additional deformational phases associated to other collisional events and the evolution of the subudction system (Bayona et al., 2012; Montes et al., 2012).

9 CONCLUSIONS.

- The field data and analytical data reveal the presence of at least two different volcano-sedimentary sequences, defined as the Quebradagrande complex (85-80 ma) and the Abejorral Fm. (100 -120 ma).
- The Aptian-Albian was a period characterized by the development of transtensive basins related to extensional tectonics in the Northern Andes, derived from changes in convergence vectors.
- In the Late Cretaceous (100-80 ma), at least three different volcanic arcs were formed: (1) volcano-sedimentary sequences were built on hyperextended continental blocks; (2) alkaline plutonism intruded rocks from

the continental margin; and (3) arc batholiths intruded the allochthonous terrenes from the western cordillera.

- After 80 ma, compressional tectonics took place in the Northern Andes. Several extensional oceanic basins were closed due to the collision of the western cordillera allochthonous terrenes, and several para-autochthonous blocks rifted during the extension.

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12 APPENDIX 1, U-Pb GEOCHRONOLOGICAL DATA.

sample name	U ppm	Th/U	238U/206 Pb	1 sigma % error	207Pb/206Pb	1 sigma % error	206/238 age	1 sigma abs error	207/206 age	1 sigma abs error	Best age	1 sigma
AP00333-1	224.16	1.79	3.38	0.01	0.11	0.01	1670.37	18.50	1734.89	15.81	1734.89	15.81
AP0033-2	611.04	0.19	8.67	0.02	0.06	0.01	703.91	12.28	717.37	19.67	703.91	12.28
AP0033-3	211.05	1.15	5.08	0.01	0.08	0.01	1158.12	13.42	1199.37	21.04	1199.37	21.04
AP0033-4	92.39	0.41	4.83	0.02	0.08	0.01	1212.24	17.43	1255.81	22.13	1255.81	22.13
AP0033-5	322.85	0.90	4.84	0.01	0.08	0.01	1211.20	15.71	1257.52	22.55	1257.52	22.55
AP0033-6	451.08	0.89	3.06	0.01	0.11	0.01	1821.42	23.76	1850.86	15.03	1850.86	15.03
AP0033-7	206.82	1.51	4.99	0.01	0.08	0.01	1176.93	13.94	1240.88	19.73	1240.88	19.73
AP0033-8	715.63	0.66	12.98	0.01	0.07	0.01	478.41	5.39	873.47	24.25	478.41	5.39
AP0033-9	579.87	1.04	10.40	0.01	0.06	0.01	591.75	6.87	560.24	21.23	591.75	6.87
AP0033-10	181.51	0.48	5.11	0.01	0.08	0.01	1152.25	13.60	1188.28	20.61	1188.28	20.61
AP0033-11	1012.41	0.78	3.13	0.01	0.11	0.01	1785.13	18.71	1846.37	14.20	1846.37	14.20
AP0033-12	706.38	0.98	12.85	0.01	0.06	0.01	483.03	6.04	497.40	23.65	483.03	6.04
AP0033-13	113.60	1.23	6.01	0.01	0.08	0.01	991.65	13.09	1127.41	24.86	1127.41	24.86
AP0033-14	277.72	0.61	26.37	0.02	0.06	0.02	239.96	3.81	485.54	43.74	239.96	3.81
AP0033-15	554.38	1.53	3.10	0.01	0.11	0.01	1803.26	16.87	1870.79	13.57	1870.79	13.57
AP0033-16	789.17	0.50	16.93	0.01	0.06	0.01	369.96	5.07	468.85	22.65	369.96	5.07
AP0033-17	219.54	0.35	6.59	0.01	0.07	0.01	910.45	9.67	982.90	22.78	982.90	22.78
AP0033-18	65.07	0.69	6.13	0.02	0.07	0.02	974.83	15.29	963.86	37.07	963.86	37.07

AP0033-19	470.59	0.42	5.14	0.01	0.08	0.01	1145.32	15.44	1150.21	18.08	1150.21	18.08
AP0033-20	238.51	0.38	6.00	0.01	0.07	0.01	993.66	12.55	968.59	22.15	968.59	22.15
AP0033-21	766.67	1.10	13.39	0.01	0.06	0.01	464.35	6.14	472.59	25.87	464.35	6.14
AP0033-22	941.87	0.35	9.60	0.01	0.06	0.01	638.48	7.67	613.38	19.76	638.48	7.67
AP0033-23	326.21	0.63	12.94	0.01	0.06	0.01	479.99	6.76	541.79	29.56	479.99	6.76
AP0033-24	963.42	1.13	12.88	0.02	0.06	0.01	482.04	7.07	495.76	21.52	482.04	7.07
AP0033-25	105.63	0.61	50.83	0.03	0.05	0.04	125.58	3.28	194.42	96.64	125.58	3.28
AP0033-26	46.03	0.47	9.14	0.02	0.06	0.02	669.33	15.63	578.91	49.89	669.33	15.63
AP0033-27	372.70	1.57	19.12	0.02	0.05	0.02	328.71	5.67	333.64	36.01	328.71	5.67
AP0033-28	205.47	0.41	51.51	0.02	0.05	0.03	123.94	2.81	169.97	74.03	123.94	2.81
AP0033-29	146.86	0.42	6.64	0.01	0.08	0.02	904.38	12.33	1205.42	32.63	1205.42	32.63
AP0033-30	447.62	0.39	4.84	0.01	0.08	0.01	1210.01	14.47	1208.20	16.73	1208.20	16.73
AP0033-31	302.41	1.26	3.17	0.01	0.11	0.01	1769.82	22.10	1778.15	15.02	1778.15	15.02
AP0033-32	158.88	0.53	5.12	0.02	0.07	0.01	1149.99	22.44	1045.31	24.47	1045.31	24.47
AP0033-33	965.31	0.63	21.56	0.01	0.05	0.01	292.26	3.43	294.23	25.07	292.26	3.43
AP0033-34	296.90	0.96	2.49	0.01	0.15	0.01	2178.08	23.13	2387.77	13.29	2387.77	13.29
AP0033-35	280.61	1.11	11.05	0.01	0.06	0.01	558.37	6.90	603.39	29.13	558.37	6.90
AP0033-36	641.15	1.24	4.86	0.01	0.08	0.01	1205.22	14.53	1210.92	16.92	1210.92	16.92
AP0033-37	158.72	1.12	6.82	0.02	0.07	0.02	882.36	13.07	916.21	30.86	916.21	13.07
AP0033-38	77.64	3.99	6.25	0.02	0.07	0.01	956.78	17.96	983.09	26.32	983.09	26.32
AP0033-39	689.71	0.41	49.23	0.02	0.05	0.02	129.63	2.34	146.78	41.06	129.63	2.34
AP0033-40	229.43	0.51	5.00	0.01	0.08	0.01	1175.02	15.30	1179.29	21.72	1179.29	21.72
AP0033-41	92.78	1.01	9.53	0.02	0.06	0.02	643.11	11.89	704.76	36.87	643.11	11.89
AP0033-42	716.87	1.12	2.96	0.01	0.11	0.01	1874.92	22.72	1878.31	14.08	1878.31	14.08
AP0033-43	219.79	0.87	10.48	0.01	0.06	0.01	587.48	7.78	586.87	31.05	587.48	7.78
AP0033-44	574.94	0.67	4.50	0.01	0.09	0.01	1293.43	16.17	1484.65	15.60	1484.65	15.60
AP0033-45	356.90	0.77	13.61	0.01	0.06	0.01	457.09	5.80	460.52	29.87	457.09	5.80
AP0033-46	1272.86	0.97	11.29	0.01	0.06	0.01	547.17	6.98	567.55	19.55	547.17	6.98
AP0033-47	247.12	0.40	5.78	0.01	0.08	0.01	1029.38	13.35	1091.75	20.10	1091.75	20.10
AP0033-48	624.44	0.80	13.06	0.02	0.06	0.01	475.53	6.94	653.16	23.48	475.53	6.94
AP0033-49	97.52	1.60	5.11	0.01	0.08	0.01	1152.75	12.83	1219.19	22.93	1219.19	22.93
AP0033-50	494.56	0.38	43.58	0.02	0.05	0.02	146.25	2.29	186.13	44.30	146.25	2.29
AP0033-51	297.34	0.45	43.50	0.02	0.05	0.02	146.51	2.28	144.30	55.26	146.51	2.28
AP0033-52	473.67	0.50	6.01	0.01	0.07	0.01	992.34	11.05	1062.59	18.06	1062.59	18.06
AP0033-53	430.92	0.26	4.42	0.01	0.08	0.01	1313.71	15.25	1315.41	17.05	1315.41	17.05
AP0033-54	296.95	0.39	5.77	0.01	0.07	0.01	1030.91	12.90	1048.62	21.20	1048.62	21.20
AP0033-55	463.05	0.46	5.02	0.01	0.08	0.01	1171.75	12.53	1211.66	18.03	1211.66	18.03
AP0033-56	286.96	0.33	5.76	0.01	0.07	0.01	1032.59	14.10	1046.74	20.30	1046.74	20.30
AP0033-57	313.42	0.47	13.69	0.01	0.06	0.02	454.61	6.30	435.31	34.81	454.61	6.30
AP0033-58	919.43	0.25	3.02	0.01	0.12	0.01	1844.21	17.98	1899.72	13.79	1899.72	13.79
AP0033-59	221.86	0.61	5.98	0.01	0.07	0.01	997.51	13.84	992.16	21.04	992.16	21.04
AP0033-60	1656.28	0.34	17.01	0.02	0.05	0.01	368.34	6.94	334.41	22.53	368.34	6.94
AP0033-61	298.03	0.82	50.90	0.02	0.05	0.02	125.42	1.99	97.76	54.29	125.42	1.99
AP0033-62	238.97	1.35	5.84	0.02	0.07	0.01	1018.83	14.48	1048.75	20.38	1048.75	20.38
AP0033-63	820.81	0.39	4.92	0.01	0.08	0.01	1193.34	14.47	1203.31	16.31	1203.31	16.31
AP0033-64	368.85	0.44	41.26	0.02	0.05	0.02	154.39	2.51	218.85	49.71	154.39	2.51
AP0033-65	208.91	0.98	4.60	0.03	0.11	0.01	1268.44	31.72	1733.11	17.64	1733.11	17.64
AP0033-66	171.51	0.49	5.27	0.01	0.08	0.01	1120.93	13.40	1072.74	23.54	1072.74	23.54
AP0033-67	457.56	0.63	9.89	0.01	0.06	0.01	620.93	7.11	634.73	23.74	620.93	7.11
AP0033-68	501.07	0.40	8.63	0.01	0.06	0.01	706.59	8.80	722.12	20.55	706.59	8.80
AP0033-69	580.02	0.40	41.09	0.02	0.05	0.02	155.00	2.41	145.49	44.43	155.00	2.41
AP0033-70	456.76	1.06	12.67	0.01	0.06	0.01	489.58	6.23	442.95	25.81	489.58	6.23
AP0033-71	1058.67	0.03	13.55	0.02	0.06	0.01	459.08	7.05	564.65	20.40	459.08	7.05
AP0033-72	79.74	0.82	3.89	0.02	0.09	0.01	1475.07	26.58	1499.94	24.83	1499.94	24.83
AP0033-73	250.92	0.32	6.42	0.02	0.07	0.01	933.27	14.27	944.83	24.97	944.83	24.97
AP0033-74	229.95	0.66	5.02	0.01	0.08	0.01	1171.59	15.71	1135.19	21.22	1135.19	21.22
AP0033-75	3180.56	0.22	7.18	0.02	0.10	0.01	840.65	13.16	1597.68	14.91	1597.68	14.91
AP0033-76	930.83	0.44	3.23	0.01	0.11	0.01	1738.78	16.86	1837.58	13.42	1837.58	13.42
AP0033-77	178.97	1.24	9.31	0.01	0.06	0.01	657.84	8.74	670.47	31.17	657.84	8.74
AP0033-78	157.86	1.44	5.95	0.02	0.07	0.01	1001.77	15.02	1025.39	25.36	1025.39	25.36
AP0033-79	147.43	0.67	6.04	0.02	0.07	0.01	987.71	13.74	1032.00	23.68	1032.00	23.68
AP0033-80	475.27	0.54	52.84	0.02	0.05	0.02	120.86	1.90	115.59	45.19	120.86	1.90
AP0033-81	359.69	0.90	12.69	0.01	0.06	0.01	489.00	6.51	480.99	26.43	489.00	6.51
AP0033-82	1432.74	1.02	46.85	0.01	0.05	0.01	136.14	1.86	138.74	31.31	136.14	1.86
AP0033-83	731.06	0.80	44.72	0.02	0.05	0.01	142.56	3.06	269.20	33.25	142.56	3.06
AP0033-84	282.44	0.41	4.88	0.01	0.08	0.01	1200.66	15.41	1199.42	19.88	1199.42	19.88
AP0033-85	243.07	0.95	12.08	0.01	0.06	0.01	512.86	6.74	540.32	28.64	512.86	6.74
AP0033-86	365.19	0.40	13.76	0.01	0.06	0.01	452.10	5.74	488.48	30.22	452.10	5.74
AP0033-87	436.12	0.30	5.77	0.01	0.07	0.01	1030.09	12.41	959.02	19.26	959.02	19.26
AP0033-88	278.74	0.73	12.11	0.01	0.06	0.01	511.48	6.78	475.33	26.45	511.48	6.78
AP0033-89	545.15	0.39	13.38	0.01	0.06	0.01	464.64	5.96	504.18	25.12	464.64	5.96

AP0033-90	429.28	1.03	13.27	0.01	0.06	0.01	468.33	5.32	463.50	27.41	468.33	5.32
AP0033-91	168.20	1.21	4.82	0.01	0.08	0.01	1215.04	14.81	1161.15	20.90	1161.15	20.90
AP0033-92	24.26	1.86	4.85	0.02	0.08	0.02	1208.69	25.47	1142.36	39.34	1142.36	39.34
AP0033-93	333.82	1.31	11.28	0.02	0.06	0.01	547.78	8.36	639.63	26.15	547.78	8.36
AP0033-94	233.55	0.34	4.46	0.02	0.09	0.01	1303.91	17.71	1350.52	17.83	1350.52	17.83
AP0033-95	567.56	0.74	3.75	0.01	0.12	0.01	1524.54	17.55	1983.98	14.06	1983.98	14.06
AP0033-96	380.34	1.02	13.18	0.02	0.06	0.01	471.40	7.17	483.47	28.93	471.40	7.17
AP0033-97	394.78	0.17	5.78	0.01	0.07	0.01	1028.10	13.38	1025.68	17.69	1025.68	17.69
AP0033-98	3542.38	0.69	40.98	0.02	0.05	0.01	155.42	2.42	184.09	24.05	155.42	2.42
SZ008-1	368.43	0.71	24.37	0.01	0.05	0.02	259.20	3.26	217.69	42.33	259.20	3.26
SZ008-2	86.30	0.64	6.81	0.02	0.07	0.02	883.80	12.46	876.17	33.79	876.17	12.46
SZ008-3	268.13	0.84	22.54	0.02	0.05	0.02	279.89	4.17	336.24	39.76	279.89	4.17
SZ008-4	297.35	1.15	7.17	0.01	0.07	0.01	841.63	10.65	883.58	20.67	883.58	10.65
SZ008-5	1395.15	0.28	24.56	0.01	0.05	0.01	257.28	2.94	286.75	23.15	257.28	2.94
SZ008-6	456.99	0.36	5.20	0.01	0.08	0.01	1134.10	13.16	1152.24	18.35	1152.24	18.35
SZ008-7	1202.60	0.48	6.60	0.01	0.07	0.01	909.36	10.17	944.61	16.91	944.61	16.91
SZ008-8	148.79	0.44	6.50	0.02	0.07	0.01	922.25	13.93	939.69	25.57	939.69	25.57
SZ008-9	76.83	0.60	6.45	0.02	0.07	0.02	928.58	16.45	920.60	36.88	920.60	36.88
SZ008-10	89.95	0.35	6.23	0.02	0.07	0.02	959.23	16.52	990.23	30.77	990.23	30.77
SZ008-11	332.90	0.55	10.89	0.01	0.06	0.01	566.54	6.45	506.35	25.69	566.54	6.45
SZ008-12	178.43	0.54	22.89	0.02	0.05	0.02	275.65	4.10	279.19	52.33	275.65	4.10
SZ008-13	359.50	0.70	22.92	0.02	0.05	0.02	275.27	4.39	283.42	41.75	275.27	4.39
SZ008-14	117.75	0.33	6.76	0.02	0.07	0.01	889.48	12.52	1039.43	24.63	1039.43	24.63
SZ008-15	209.07	0.83	23.77	0.02	0.05	0.02	265.61	4.21	337.27	43.66	265.61	4.21
SZ008-16	555.88	0.53	5.19	0.01	0.08	0.01	1136.57	11.41	1151.60	16.69	1151.60	16.69
SZ008-17	525.46	0.13	10.83	0.01	0.06	0.01	569.28	6.40	591.04	21.90	569.28	6.40
SZ008-18	178.48	0.60	23.12	0.02	0.05	0.02	272.95	4.45	261.57	54.08	272.95	4.45
SZ008-19	1744.20	0.11	18.67	0.01	0.05	0.01	336.30	3.65	326.14	22.04	336.30	3.65
SZ008-20	190.70	0.59	5.09	0.01	0.08	0.01	1156.68	12.75	1156.49	22.91	1156.49	22.91
SZ008-21	225.74	0.47	22.69	0.02	0.05	0.02	277.97	4.57	295.42	41.27	277.97	4.57
SZ008-22	912.29	0.41	19.82	0.01	0.05	0.01	317.29	4.61	313.14	24.98	317.29	4.61
SZ008-23	396.67	0.69	1.89	0.02	0.19	0.01	2741.61	35.47	2700.68	13.74	2700.68	13.74
SZ008-24	495.82	1.01	22.72	0.01	0.05	0.01	277.66	4.01	240.11	31.12	277.66	4.01
SZ008-25	140.02	0.50	5.07	0.01	0.08	0.01	1161.49	14.89	1167.12	23.07	1167.12	23.07
SZ008-26	142.54	1.28	2.19	0.01	0.17	0.01	2426.83	28.20	2582.19	13.61	2582.19	13.61
SZ008-27	215.83	0.85	22.43	0.02	0.05	0.02	281.23	4.66	317.12	40.62	281.23	4.66
SZ008-28	869.76	0.23	11.43	0.01	0.06	0.01	540.51	5.78	580.21	19.86	540.51	5.78
SZ008-29	1699.62	0.80	22.87	0.01	0.05	0.01	275.87	3.12	267.73	23.39	275.87	3.12
SZ008-30	475.54	0.25	5.12	0.01	0.08	0.01	1149.46	14.88	1136.85	17.85	1136.85	17.85
SZ008-31	702.94	0.52	23.65	0.01	0.05	0.01	267.00	3.19	277.87	27.13	267.00	3.19
SZ008-32	921.71	0.13	5.87	0.02	0.07	0.01	1014.29	14.73	973.04	17.57	973.04	17.57
SZ008-33	985.74	0.57	22.60	0.02	0.05	0.01	279.13	4.20	293.18	26.46	279.13	4.20
SZ008-34	340.43	0.80	22.98	0.01	0.05	0.02	274.57	3.81	259.93	34.71	274.57	3.81
SZ008-35	1669.91	0.10	17.82	0.02	0.07	0.01	351.88	8.31	793.19	23.62	351.88	8.31
SZ008-36	208.91	0.72	6.47	0.02	0.07	0.01	926.23	13.07	933.35	21.83	933.35	21.83
SZ008-37	84.06	0.53	6.29	0.02	0.09	0.01	951.63	17.22	1450.74	27.48	1450.74	27.48
SZ008-38	353.55	0.80	23.14	0.02	0.05	0.02	272.71	4.33	261.57	39.29	272.71	4.33
SZ008-39	432.70	0.95	23.30	0.01	0.05	0.02	270.94	3.35	300.78	36.67	270.94	3.35
SZ008-40	246.17	0.44	22.90	0.02	0.05	0.02	275.48	4.11	338.27	43.02	275.48	4.11
SZ008-41	202.74	0.34	4.97	0.01	0.08	0.01	1181.60	13.17	1181.03	21.82	1181.03	21.82
SZ008-42	166.29	0.38	6.59	0.01	0.07	0.01	911.05	11.78	950.85	22.10	950.85	22.10
SZ008-43	242.81	0.55	24.27	0.02	0.05	0.02	260.29	4.50	285.55	47.60	260.29	4.50
SZ008-44	829.15	0.37	5.31	0.01	0.08	0.01	1112.91	12.86	1170.71	15.91	1170.71	15.91
SZ008-45	315.95	0.61	6.16	0.01	0.07	0.01	969.18	11.80	1007.08	19.89	1007.08	19.89
SZ008-46	306.07	0.37	4.95	0.01	0.08	0.01	1187.12	15.47	1186.31	16.13	1186.31	16.13
SZ008-47	1204.93	0.26	21.14	0.01	0.05	0.01	297.88	4.34	277.78	20.08	297.88	4.34
SZ008-48	466.24	0.50	20.30	0.02	0.05	0.01	310.04	4.80	321.97	28.83	310.04	4.80
SZ008-49	290.11	0.41	10.65	0.01	0.06	0.01	578.34	8.07	609.73	27.06	578.34	8.07
SZ008-50	191.16	0.78	23.28	0.04	0.07	0.03	271.08	10.07	782.47	60.16	271.08	10.07
SZ008-51	523.62	1.09	6.28	0.02	0.07	0.01	953.17	13.94	1047.65	14.89	1047.65	14.89
SZ008-52	557.29	0.53	5.90	0.01	0.07	0.01	1008.70	13.56	954.60	17.04	954.60	17.04
SZ008-53	399.20	0.76	23.00	0.02	0.05	0.02	274.34	4.41	261.47	37.22	274.34	4.41
SZ008-54	516.48	0.57	5.42	0.01	0.08	0.01	1091.58	14.46	1095.37	15.30	1095.37	15.30
SZ008-55	305.91	0.62	5.03	0.01	0.08	0.01	1169.76	14.97	1166.34	17.24	1166.34	17.24
SZ008-56	1543.05	0.41	23.66	0.02	0.05	0.01	266.91	4.36	298.88	19.54	266.91	4.36
SZ008-57	604.14	0.82	22.56	0.02	0.05	0.01	279.56	4.19	336.09	29.73	279.56	4.19
SZ008-58	186.73	0.42	6.56	0.02	0.07	0.01	914.52	13.48	985.99	21.29	985.99	21.29
SZ008-59	1452.86	0.52	22.85	0.02	0.05	0.01	276.06	4.58	308.78	19.81	276.06	4.58
SZ008-60	417.31	0.72	22.53	0.02	0.07	0.02	279.96	4.85	829.29	39.84	279.96	4.85
SZ008-61	265.53	0.31	6.46	0.02	0.07	0.01	927.81	13.91	923.89	23.98	923.89	23.98

SZ008-62	436.52	0.67	23.15	0.02	0.05	0.01	272.64	4.48	345.62	30.93	272.64	4.48
SZ008-63	132.12	0.33	4.91	0.02	0.08	0.01	1194.75	17.66	1128.09	21.29	1128.09	21.29
SZ008-64	187.54	1.15	5.27	0.02	0.08	0.01	1120.62	16.25	1118.07	23.34	1118.07	23.34
SZ008-65	447.93	0.41	5.42	0.02	0.08	0.01	1091.17	15.19	1120.35	17.16	1120.35	17.16
SZ008-66	77.06	0.56	6.22	0.02	0.07	0.02	960.79	15.78	966.94	34.66	966.94	34.66
SZ008-67	71.99	0.47	4.93	0.02	0.08	0.01	1189.73	19.37	1181.30	28.61	1181.30	28.61
SZ008-68	152.29	0.41	21.14	0.02	0.06	0.02	297.91	5.09	420.11	45.08	297.91	5.09
SZ008-69	48.34	0.64	6.58	0.03	0.07	0.03	912.45	28.59	775.96	52.53	912.45	28.59
SZ008-70	75.41	0.56	4.82	0.02	0.08	0.01	1214.68	22.71	1172.88	26.49	1172.88	26.49
SZ008-71	153.84	0.36	6.30	0.02	0.07	0.01	949.14	13.60	938.67	25.00	938.67	25.00
SZ008-72	731.07	0.44	4.68	0.01	0.08	0.01	1248.28	15.86	1232.72	12.78	1232.72	12.78
SZ008-73	1393.91	0.09	23.68	0.01	0.05	0.01	266.62	3.63	326.43	20.65	266.62	3.63
SZ008-74	142.44	0.38	4.62	0.02	0.08	0.01	1263.44	18.28	1242.73	17.71	1242.73	17.71
SZ008-75	841.43	0.10	6.28	0.01	0.07	0.01	952.29	12.51	1022.02	14.20	1022.02	14.20
SZ008-76	127.36	0.35	7.29	0.02	0.07	0.01	828.53	13.29	907.10	26.10	907.10	13.29
SZ008-77	155.86	0.67	5.70	0.02	0.08	0.01	1041.25	16.62	1072.75	21.98	1072.75	21.98
SZ008-78	454.15	0.31	4.40	0.01	0.08	0.01	1320.46	17.28	1285.92	14.75	1285.92	14.75
SZ008-79	408.91	1.06	22.04	0.02	0.05	0.01	286.07	4.96	332.29	32.11	286.07	4.96
SZ008-80	278.20	0.09	6.36	0.02	0.07	0.01	941.03	13.46	986.21	20.78	986.21	20.78
SZ008-81	694.61	0.78	11.11	0.01	0.06	0.01	555.43	7.53	548.06	19.84	555.43	7.53
SZ008-82	320.67	0.50	23.33	0.02	0.05	0.02	270.61	4.65	314.29	38.60	270.61	4.65
SZ008-83	562.17	0.92	22.95	0.02	0.05	0.01	274.97	4.45	317.07	26.31	274.97	4.45
SZ008-84	166.23	0.48	7.30	0.02	0.07	0.01	827.78	14.15	834.84	28.92	827.78	14.15
SZ008-85	935.63	0.56	23.62	0.01	0.06	0.03	267.30	3.80	709.66	63.85	267.30	3.80
SZ008-86	261.15	0.32	6.55	0.01	0.07	0.01	916.36	12.57	952.14	21.11	952.14	21.11
SZ008-87	1533.98	0.62	22.47	0.01	0.05	0.01	280.67	3.85	285.59	19.89	280.67	3.85
SZ008-88	1032.68	0.13	26.81	0.01	0.05	0.01	236.06	3.46	299.50	24.89	236.06	3.46
SZ008-89	218.19	0.36	21.17	0.02	0.05	0.02	297.55	4.96	340.62	45.36	297.55	4.96
SZ008-90	983.82	0.50	8.67	0.01	0.07	0.01	703.46	9.12	841.04	16.44	703.46	9.12
SZ008-91	813.31	0.47	22.83	0.01	0.06	0.01	276.35	3.99	423.36	24.56	276.35	3.99
SZ008-92	1143.74	0.21	22.99	0.01	0.05	0.01	274.43	3.89	291.71	23.26	274.43	3.89
SZ008-93	369.24	0.61	24.43	0.02	0.05	0.02	258.66	4.44	346.96	38.51	258.66	4.44
SZ008-94	920.32	0.59	21.59	0.01	0.05	0.01	291.86	4.27	391.10	24.59	291.86	4.27
SZ008-95	192.28	0.39	6.45	0.01	0.07	0.01	929.09	12.27	968.07	23.16	968.07	23.16
SZ008-96	429.62	0.37	5.28	0.01	0.08	0.01	1118.93	14.73	1302.46	16.40	1302.46	16.40
SZ008-97	695.59	0.73	22.72	0.01	0.05	0.01	277.70	3.96	364.85	24.45	277.70	3.96
SZ008-98	577.00	0.28	6.04	0.02	0.07	0.01	987.84	15.43	1061.76	15.56	1061.76	15.56
SZ008-99	1846.31	0.60	21.93	0.01	0.05	0.01	287.47	3.90	261.86	19.08	287.47	3.90
SZ008-100	720.00	0.25	22.05	0.01	0.05	0.01	285.94	4.17	269.83	28.73	285.94	4.17
DM-056_1	100.18	0.55	65.71	0.02	0.05	0.03	97.37	2.25	0.00	49.13	97.37	2.25
DM-056_2	290.37	1.05	66.09	0.02	0.05	0.02	96.81	1.62	8.71	49.92	96.81	1.62
DM-056_3	188.66	0.77	64.66	0.02	0.05	0.02	98.93	1.76	153.51	48.39	98.93	1.76
DM-056_4	151.79	1.00	67.28	0.02	0.06	0.04	95.11	2.17	591.18	92.00	95.11	2.17
DM-056_5	134.83	0.82	66.34	0.03	0.05	0.03	96.44	2.49	77.66	61.79	96.44	2.49
DM-056_6	100.25	0.69	65.17	0.02	0.05	0.04	98.16	2.18	150.78	80.34	98.16	2.18
DM-056_7	106.26	0.55	66.10	0.02	0.05	0.03	96.79	2.01	239.04	69.89	96.79	2.01
DM-056_8	93.83	0.62	64.84	0.03	0.05	0.05	98.66	2.68	104.86	118.33	98.66	2.68
DM-056_9	120.92	0.54	65.47	0.02	0.05	0.03	97.71	2.10	121.77	71.13	97.71	2.10
DM-056_10	109.03	0.88	64.67	0.02	0.05	0.03	98.92	2.44	75.44	74.92	98.92	2.44
DM-056_11	109.33	0.63	64.56	0.03	0.05	0.03	99.08	2.69	105.08	76.29	99.08	2.69
DM-056_12	214.03	0.83	67.34	0.03	0.05	0.02	95.03	2.45	218.95	56.75	95.03	2.45
DM-056_13	110.16	0.59	63.85	0.02	0.05	0.03	100.18	2.48	230.54	68.30	100.18	2.48
DM-056_14	136.23	0.68	65.19	0.03	0.05	0.03	98.13	2.47	30.59	67.62	98.13	2.47
DM-056_15	104.33	0.65	64.99	0.04	0.05	0.04	98.43	3.73	149.32	89.59	98.43	3.73
DM-056_16	138.28	0.60	65.34	0.03	0.05	0.03	97.91	2.54	0.00	56.01	97.91	2.54
DM-056_17	110.43	0.61	66.15	0.02	0.05	0.03	96.72	1.88	277.16	68.87	96.72	1.88
DM-056_18	95.12	0.47	66.73	0.02	0.05	0.03	95.88	1.91	312.94	72.63	95.88	1.91
DM-056_19	97.98	0.76	64.89	0.02	0.05	0.03	98.58	2.23	74.15	77.42	98.58	2.23
DM-056_20	146.37	1.57	64.42	0.02	0.05	0.02	99.30	2.07	138.60	57.48	99.30	2.07
DM-056_21	108.30	0.64	66.13	0.02	0.05	0.03	96.75	2.03	0.37	55.74	96.75	2.03
DM-056_22	96.61	0.62	66.78	0.02	0.05	0.03	95.82	2.12	218.47	71.18	95.82	2.12
DM-056_23	66.46	0.42	66.61	0.03	0.05	0.04	96.06	2.46	51.22	92.92	96.06	2.46
DM-056_24	173.85	0.49	65.81	0.02	0.05	0.03	97.22	1.79	232.61	61.20	97.22	1.79
DM-056_25	190.01	0.77	66.50	0.02	0.05	0.02	96.22	1.70	252.85	55.57	96.22	1.70
DM-056_26	113.10	0.48	66.24	0.02	0.05	0.03	96.59	1.83	142.13	61.43	96.59	1.83
DM-056_27	140.73	0.60	66.57	0.02	0.05	0.03	96.11	2.21	184.10	69.97	96.11	2.21
DM-056_28	92.57	0.50	63.30	0.02	0.05	0.03	101.05	2.29	405.97	68.29	101.05	2.29
DM-056_29	120.99	0.65	66.28	0.02	0.05	0.03	96.53	1.87	191.64	65.55	96.53	1.87
DM-056_30	104.38	0.54	65.82	0.02	0.05	0.03	97.20	1.92	31.42	71.88	97.20	1.92
DM-056_31	94.32	0.51	63.28	0.02	0.05	0.03	101.08	2.24	0.00	53.74	101.08	2.24

SZ-012_1	158.83	0.37	52.96	0.03	0.05	0.04	120.59	3.77	275.23	90.65	120.59	3.77
SZ-012_2	197.49	0.30	60.87	0.03	0.05	0.05	105.05	3.04	101.84	104.99	105.05	3.04
SZ-012_3	153.54	0.31	62.76	0.03	0.05	0.04	101.90	3.26	261.88	95.67	101.90	3.26
SZ-012_4	294.72	0.44	63.32	0.02	0.05	0.04	101.01	1.95	222.79	85.50	101.01	1.95
SZ-012_5	88.17	0.25	59.60	0.03	0.05	0.06	107.27	2.86	20.73	129.23	107.27	2.86
SZ-012_6	215.26	0.43	61.81	0.02	0.05	0.04	103.46	2.29	124.79	84.58	103.46	2.29
SZ-012_7	217.18	0.68	26.53	0.02	0.05	0.02	238.54	4.53	349.88	49.97	238.54	4.53
SZ-012_8	322.83	0.40	62.70	0.02	0.05	0.03	102.00	2.41	160.07	67.25	102.00	2.41
SZ-012_9	201.39	0.25	63.57	0.02	0.05	0.03	100.61	2.29	273.30	76.92	100.61	2.29
SZ-012_10	150.35	0.26	60.28	0.03	0.05	0.04	106.07	2.95	279.19	85.97	106.07	2.95
SZ-012_11	243.96	0.37	63.18	0.03	0.05	0.04	101.23	2.59	100.97	81.78	101.23	2.59
SZ-012_12	165.85	0.39	64.81	0.03	0.05	0.04	98.70	3.23	7.51	95.09	98.70	3.23
SZ-012_13	111.10	0.35	61.45	0.03	0.05	0.05	104.05	3.32	293.46	101.48	104.05	3.32
SZ-012_14	120.39	0.31	64.18	0.04	0.05	0.05	99.66	3.67	97.16	103.22	99.66	3.67
SZ-012_15	264.65	0.43	28.04	0.02	0.05	0.02	225.86	3.82	219.77	51.74	225.86	3.82
SZ-012_16	158.12	0.48	61.62	0.03	0.05	0.04	103.78	2.71	385.15	94.88	103.78	2.71
SZ-012_17	125.39	0.29	64.22	0.02	0.05	0.05	99.61	2.32	386.32	100.57	99.61	2.32
SZ-012_18	1740.42	0.28	15.17	0.01	0.06	0.01	411.53	5.71	503.33	19.09	411.53	5.71
SZ-012_19	183.75	0.35	61.81	0.03	0.06	0.04	103.45	2.59	533.00	75.89	103.45	2.59
SZ-012_20	195.05	0.33	60.01	0.03	0.05	0.04	106.54	2.68	0.00	95.27	106.54	2.68
SZ-012_21	132.27	0.31	60.51	0.03	0.05	0.05	105.66	2.96	132.09	107.34	105.66	2.96
SZ-012_22	165.45	0.38	63.16	0.03	0.05	0.03	101.27	2.68	311.02	75.42	101.27	2.68
SZ-012_23	256.89	0.58	65.15	0.02	0.05	0.04	98.20	2.28	54.32	86.70	98.20	2.28
SZ-012_24	169.61	0.37	62.69	0.03	0.05	0.04	102.01	2.70	106.32	88.53	102.01	2.70
SZ-012_25	1048.54	0.40	85.83	0.02	0.05	0.02	74.67	1.45	78.97	46.01	74.67	1.45
SZ-012_26	313.66	0.39	61.94	0.03	0.05	0.03	103.24	2.92	67.80	69.52	103.24	2.92
SZ-012_27	122.04	0.25	56.68	0.03	0.05	0.05	112.74	3.26	173.71	102.84	112.74	3.26
SZ-012_28	122.00	0.35	61.79	0.03	0.05	0.05	103.49	2.98	346.40	99.61	103.49	2.98
SZ-018_1	134.58	0.28	54.80	0.03	0.06	0.05	116.58	3.36	475.41	108.08	116.58	3.36
SZ-018_2	5313.71	0.35	6.84	0.01	0.09	0.01	879.93	10.44	1347.11	15.83	1347.11	15.83
SZ-018_3	102.68	0.34	54.08	0.04	0.06	0.07	118.11	4.51	544.97	144.86	118.11	4.51
SZ-018_4	130.70	0.35	50.51	0.03	0.05	0.04	126.39	4.33	259.95	97.87	126.39	4.33
SZ-018_5	1433.36	0.17	5.52	0.02	0.09	0.01	1073.82	18.74	1392.75	18.04	1392.75	18.04
SZ-018_6	756.97	0.20	6.13	0.01	0.08	0.01	973.65	12.70	1145.91	17.78	1145.91	17.78
SZ-018_7	546.91	0.30	7.22	0.01	0.08	0.01	836.71	10.40	1098.57	20.88	1098.57	20.88
SZ-018_8	496.17	0.46	52.12	0.03	0.05	0.02	122.51	3.11	330.69	50.14	122.51	3.11
SZ-018_9	747.96	0.36	5.99	0.02	0.08	0.01	995.44	14.56	1177.66	16.79	1177.66	16.79
SZ-018_10	#####	0.57	11.29	0.02	0.06	0.01	547.27	8.04	626.01	19.24	547.27	8.04
SZ-018_11	1297.70	0.41	2.65	0.01	0.14	0.01	2066.36	22.71	2240.62	14.99	2240.62	14.99
SZ-018_12	1468.63	0.41	5.40	0.01	0.08	0.01	1094.53	13.60	1204.19	15.30	1204.19	15.30
SZ-018_13	2456.10	0.05	7.11	0.01	0.07	0.01	848.87	10.34	1008.89	15.85	1008.89	15.85
SZ-018_14	199.93	0.42	49.22	0.04	0.06	0.05	129.66	5.23	607.16	99.34	129.66	5.23
SZ-018_15	2583.67	0.78	7.24	0.01	0.08	0.01	833.69	10.40	1183.71	14.97	1183.71	14.97
SZ-018_16	919.12	0.40	4.41	0.01	0.10	0.01	1317.94	16.68	1668.44	15.03	1668.44	15.03
SZ-018_17	1049.96	0.84	5.31	0.02	0.09	0.01	1113.02	16.27	1507.22	16.04	1507.22	16.04
SZ-018_18	1720.95	0.09	18.29	0.01	0.05	0.01	343.21	4.42	354.87	21.92	343.21	4.42
SZ-018_19	474.20	0.49	4.96	0.02	0.10	0.01	1184.07	16.89	1594.04	16.12	1594.04	16.12
SZ-018_20	221.13	4.70	6.22	0.02	0.07	0.01	961.13	16.25	1025.44	21.72	1025.44	21.72
SZ-018_21	175.73	0.38	62.77	0.03	0.06	0.04	101.89	2.72	430.57	83.46	101.89	2.72
SZ-018_22	93.79	0.32	58.15	0.04	0.07	0.04	109.91	4.77	809.50	73.12	109.91	4.77
SZ-018_23	770.73	0.85	5.05	0.01	0.08	0.01	1164.34	15.37	1160.39	17.52	1160.39	17.52
SZ-018_24	191.61	0.65	57.45	0.02	0.06	0.04	111.24	2.45	568.59	79.61	111.24	2.45
SZ-018_25	122.71	0.25	64.75	0.03	0.06	0.05	98.80	3.12	460.21	115.45	98.80	3.12
SZ-018_26	835.99	0.59	3.03	0.01	0.11	0.01	1837.46	21.59	1854.34	14.57	1854.34	14.57
SZ-018_27	391.23	0.34	7.02	0.02	0.08	0.01	858.29	12.29	1312.23	20.17	1312.23	20.17
SZ-011_1	120.00	0.29	58.00	0.05	0.05	0.06	110.20	5.18	308.15	130.14	110.20	5.18
SZ-011_2	149.72	0.40	62.91	0.03	0.05	0.04	101.66	3.19	88.37	90.96	101.66	3.19
SZ-011_3	160.25	0.35	60.62	0.04	0.06	0.05	105.47	4.01	561.34	98.20	105.47	4.01
SZ-011_4	85.86	0.31	61.77	0.05	0.05	0.06	103.53	4.71	310.44	123.01	103.53	4.71
SZ-011_5	177.93	0.35	59.50	0.03	0.06	0.04	107.43	2.83	417.12	87.45	107.43	2.83
SZ-011_6	235.88	0.39	57.66	0.03	0.05	0.04	110.84	2.78	195.83	80.26	110.84	2.78
SZ-011_7	171.12	0.32	62.56	0.03	0.05	0.04	102.23	3.05	88.37	99.21	102.23	3.05
SZ-011_8	304.21	0.62	64.22	0.02	0.05	0.03	99.61	2.07	326.37	63.76	99.61	2.07
SZ-011_9	316.28	0.25	61.57	0.02	0.05	0.03	103.87	2.17	144.17	66.84	103.87	2.17
SZ-011_10	242.44	0.43	61.25	0.02	0.05	0.04	104.39	2.55	74.22	91.63	104.39	2.55
SZ-011_11	152.06	0.35	57.25	0.03	0.07	0.04	111.62	3.46	995.74	82.55	111.62	3.46
SZ-011_12	264.23	0.29	59.21	0.03	0.06	0.04	107.97	3.20	447.47	89.51	107.97	3.20
SZ-011_13	276.43	0.26	58.80	0.03	0.05	0.04	108.71	2.81	81.73	89.28	108.71	2.81

SZ-011_14	185.40	0.34	60.66	0.04	0.05	0.03	105.41	3.79	207.49	71.53	105.41	3.79
SZ-011_15	434.73	0.46	6.40	0.01	0.07	0.01	935.35	12.76	977.06	21.28	977.06	21.28
SZ-011_16	70.45	0.23	65.94	0.05	0.05	0.07	97.02	4.88	355.73	143.53	97.02	4.88
SZ-011_17	247.23	0.46	64.30	0.02	0.05	0.04	99.48	1.96	284.75	81.86	99.48	1.96
SZ-011_18	193.07	0.41	64.48	0.03	0.05	0.04	99.20	3.19	235.56	98.10	99.20	3.19
SZ-011_19	211.50	0.20	63.40	0.03	0.05	0.03	100.89	2.99	262.54	76.73	100.89	2.99
SZ-011_20	130.88	0.35	63.24	0.03	0.05	0.05	101.14	2.96	360.37	103.75	101.14	2.96
SZ-011_21	186.83	0.42	61.90	0.02	0.05	0.04	103.31	2.40	93.78	85.73	103.31	2.40
SZ-011_22	273.08	0.38	64.49	0.06	0.05	0.07	99.20	5.66	142.68	150.86	99.20	5.66
SZ-011_23	45.09	0.25	57.83	0.07	0.07	0.08	110.52	7.69	838.84	158.30	110.52	7.69
SZ-011_24	177.78	0.22	60.82	0.03	0.05	0.03	105.12	2.62	275.12	71.61	105.12	2.62
SZ-011_25	271.07	0.31	62.23	0.02	0.05	0.03	102.76	2.30	314.03	74.86	102.76	2.30
SZ-011_26	160.99	0.22	64.06	0.03	0.05	0.04	99.85	2.94	134.21	97.79	99.85	2.94
SZ-011_27	144.37	0.31	66.00	0.03	0.05	0.06	96.94	3.31	255.12	123.67	96.94	3.31
SL-0057_1	209.67	0.61	23.28	0.02	0.05	0.01	271.16	4.67	242.74	32.57	271.16	4.67
SL-0057_2	60.48	0.33	24.58	0.02	0.05	0.02	257.06	5.48	354.55	54.87	257.06	5.48
SL-0057_3	1088.18	0.62	28.42	0.02	0.05	0.01	222.91	3.62	271.45	23.77	222.91	3.62
SL-0057_4	1248.90	0.38	25.18	0.02	0.05	0.01	251.06	4.07	324.90	21.88	251.06	4.07
SL-0057_5	438.92	1.06	24.46	0.02	0.05	0.02	258.28	5.16	408.65	51.33	258.28	5.16
SL-0057_6	583.00	0.56	5.49	0.02	0.08	0.01	1078.50	16.84	1301.70	16.81	1301.70	16.81
SL-0057_7	488.17	0.14	2.91	0.02	0.12	0.01	1904.16	27.19	1998.87	15.08	1998.87	15.08
SL-0057_8	180.58	0.82	23.09	0.02	0.07	0.02	273.28	5.17	995.14	41.71	273.28	5.17
SL-0057_9	362.16	0.57	19.56	0.02	0.05	0.01	321.46	5.28	289.37	29.07	321.46	5.28
SL-0057_10	659.08	0.90	25.52	0.02	0.05	0.01	247.79	4.04	242.05	26.10	247.79	4.04
SL-0057_11	213.88	0.38	7.52	0.02	0.07	0.01	804.69	13.91	1005.00	20.11	1005.00	20.11
SL-0057_12	857.40	0.23	6.47	0.02	0.08	0.01	926.30	14.29	1179.68	16.94	1179.68	16.94
SL-0057_13	276.56	0.60	3.89	0.02	0.10	0.01	1474.10	22.63	1548.81	19.45	1548.81	19.45
SL-0057_14	168.09	1.39	24.21	0.02	0.08	0.02	260.92	4.47	1265.03	29.87	260.92	4.47
SL-0057_15	334.78	0.81	9.89	0.02	0.06	0.01	620.85	9.82	625.47	22.33	620.85	9.82
SL-0057_16	512.09	0.56	24.71	0.02	0.05	0.01	255.75	4.26	295.89	27.44	255.75	4.26
SL-0057_17	46.85	0.94	5.02	0.02	0.08	0.01	1170.80	19.36	1197.12	26.13	1197.12	26.13
SL-0057_18	740.98	0.18	8.51	0.02	0.06	0.01	716.53	11.42	747.78	18.79	716.53	11.42
SL-0057_19	526.78	0.78	22.67	0.02	0.05	0.01	278.31	4.55	317.31	25.91	278.31	4.55
SL-0057_20	50.19	0.74	9.33	0.02	0.06	0.02	656.44	11.66	635.45	36.14	656.44	11.66
SL-0057_21	96.72	1.54	5.78	0.02	0.09	0.01	1028.05	16.32	1322.50	25.32	1322.50	25.32
SL-0057_22	322.46	0.66	11.73	0.02	0.06	0.01	527.40	8.62	542.29	23.69	527.40	8.62
SL-0057_23	596.00	0.70	23.74	0.02	0.05	0.01	266.00	4.43	299.38	25.47	266.00	4.43
SL-0057_24	408.97	0.02	10.16	0.02	0.06	0.01	605.05	10.03	661.71	20.67	605.05	10.03
SL-0057_25	263.71	0.78	25.49	0.02	0.05	0.01	248.05	4.19	246.87	32.99	248.05	4.19
SL-0057_26	380.74	0.88	11.69	0.02	0.06	0.01	529.01	8.39	551.54	22.07	529.01	8.39
SL-0057_27	1225.41	0.71	23.55	0.02	0.05	0.01	268.07	4.40	281.00	23.49	268.07	4.40
SL-0057_28	517.66	0.95	23.09	0.02	0.06	0.02	273.36	5.86	567.70	46.59	273.36	5.86
SL-0057_29	94.80	1.55	5.93	0.02	0.08	0.01	1004.67	15.86	1091.79	24.87	1091.79	24.87
SL-0057_30	647.45	0.75	25.38	0.02	0.05	0.01	249.14	4.09	340.82	25.66	249.14	4.09
SL-0057_31	417.66	0.61	23.77	0.02	0.05	0.01	265.64	4.33	316.70	28.35	265.64	4.33
SL-0057_32	753.82	0.51	4.27	0.02	0.10	0.01	1356.24	21.24	1596.58	16.44	1596.58	16.44
SL-0057_33	140.63	0.90	20.04	0.02	0.06	0.02	313.90	5.56	444.85	40.61	313.90	5.56
SL-0057_34	366.80	0.33	11.00	0.02	0.06	0.01	561.10	9.15	589.73	25.71	561.10	9.15
SL-0057_35	349.89	0.52	7.25	0.02	0.07	0.01	833.12	13.02	969.31	19.23	969.31	19.23
SL-0057_36	353.73	1.01	4.88	0.02	0.08	0.01	1201.87	18.53	1188.98	17.74	1188.98	17.74
SL-0057_37	267.29	0.99	25.25	0.02	0.05	0.02	250.42	4.61	346.57	42.35	250.42	4.61
SL-0057_38	286.35	1.32	24.26	0.02	0.05	0.01	260.44	4.43	256.49	31.82	260.44	4.43
SL-0057_39	349.05	0.25	5.74	0.02	0.07	0.01	1035.56	15.70	1036.25	18.55	1036.25	18.55
SL-0057_40	434.82	0.39	22.31	0.02	0.05	0.01	282.61	4.63	289.96	27.59	282.61	4.63
SL-0057_41	329.39	0.74	24.52	0.02	0.05	0.01	257.67	4.32	313.51	30.36	257.67	4.32
SL-0057_42	966.77	1.06	25.12	0.02	0.06	0.01	251.69	4.13	507.26	21.77	251.69	4.13
SL-0057_43	374.83	0.23	14.42	0.02	0.06	0.02	432.21	8.12	471.74	35.15	432.21	8.12
SL-0057_44	374.13	0.76	4.97	0.02	0.08	0.01	1181.54	17.85	1182.76	17.61	1182.76	17.61
SL-0057_45	859.64	0.81	24.89	0.02	0.10	0.01	253.88	4.34	1587.36	22.61	1587.36	22.61
SL-0057_46	307.74	0.56	2.90	0.02	0.12	0.01	1909.53	27.24	1891.73	15.48	1891.73	15.48
SL-0057_47	946.65	0.88	24.00	0.02	0.05	0.01	263.10	4.26	309.36	23.00	263.10	4.26
SL-0057_48	486.68	0.57	12.60	0.02	0.06	0.01	492.16	7.86	487.80	23.09	492.16	7.86
SL-0057_49	570.96	0.63	21.38	0.02	0.05	0.01	294.67	4.83	331.10	24.74	294.67	4.83
SL-0057_50	168.61	0.66	9.51	0.02	0.07	0.01	644.74	10.49	1045.28	25.04	644.74	10.49
SL-0057_51	372.62	0.45	11.54	0.02	0.06	0.01	535.84	8.65	538.27	22.54	535.84	8.65
SL-0057_52	163.21	0.60	2.66	0.02	0.13	0.01	2059.58	28.99	2090.39	15.47	2090.39	15.47
JPC13_64	462.89	0.50	76.80	0.01	0.05	0.01	83.39	1.07	94.08	31.72	83.39	1.07
JPC13_63	293.50	0.44	73.81	0.01	0.05	0.02	86.75	1.11	97.30	35.77	86.75	1.11
JPC13_62	501.99	0.67	76.67	0.01	0.05	0.01	83.54	1.01	92.80	27.98	83.54	1.01

JPC13_61	592.20	0.74	76.86	0.01	0.05	0.01	83.33	0.91	147.89	25.58	83.33	0.91
JPC13_60	379.66	0.54	81.24	0.01	0.05	0.01	78.86	1.12	102.38	30.73	78.86	1.12
JPC13_59	387.66	0.70	77.38	0.01	0.05	0.02	82.77	1.00	165.02	38.61	82.77	1.00
JPC13_58	348.83	0.58	74.28	0.01	0.05	0.02	86.21	1.13	181.91	36.05	86.21	1.13
JPC13_57	390.08	0.58	74.26	0.02	0.05	0.02	86.22	1.30	222.99	34.85	86.22	1.30
JPC13_56	286.55	0.39	75.87	0.02	0.05	0.02	84.41	1.40	353.74	48.69	84.41	1.40
JPC13_55	452.77	0.62	76.89	0.01	0.05	0.01	83.29	0.98	122.48	31.29	83.29	0.98
JPC13_54	355.84	0.47	78.85	0.01	0.05	0.01	81.24	1.06	65.59	32.06	81.24	1.06
JPC13_53	310.80	0.50	77.06	0.01	0.05	0.01	83.12	1.12	60.06	33.13	83.12	1.12
JPC13_52	409.94	0.60	76.84	0.01	0.05	0.01	83.35	1.01	48.50	33.12	83.35	1.01
JPC13_51	470.90	0.66	79.92	0.01	0.05	0.01	80.16	1.00	109.38	30.30	80.16	1.00
JPC13_50	516.13	0.67	80.62	0.02	0.05	0.02	79.47	1.19	118.18	35.20	79.47	1.19
JPC13_49	1208.64	0.80	73.84	0.01	0.05	0.01	86.71	1.05	167.34	27.42	86.71	1.05
JPC13_48	695.80	0.58	79.53	0.01	0.05	0.01	80.55	0.94	82.76	27.32	80.55	0.94
JPC13_47	424.73	0.60	77.49	0.01	0.05	0.01	82.66	1.01	74.41	33.88	82.66	1.01
JPC13_46	684.90	0.64	78.94	0.02	0.05	0.02	81.15	1.45	74.98	42.11	81.15	1.45
JPC13_45	480.01	0.52	76.34	0.01	0.05	0.01	83.89	0.99	239.08	28.42	83.89	0.99
JPC13_44	426.97	0.56	78.17	0.02	0.05	0.01	81.94	1.53	84.84	29.76	81.94	1.53
JPC13_43	302.10	0.49	75.89	0.02	0.05	0.02	84.39	1.64	76.05	35.29	84.39	1.64
JPC13_42	481.17	0.71	81.43	0.02	0.05	0.01	78.68	1.53	104.91	26.31	78.68	1.53
JPC13_41	430.87	0.47	76.87	0.02	0.05	0.01	83.32	1.56	114.01	24.28	83.32	1.56
JPC13_40	616.13	0.80	76.97	0.02	0.05	0.01	83.22	1.62	282.11	24.03	83.22	1.62
JPC13_39	368.95	0.59	78.22	0.02	0.05	0.01	81.90	1.54	105.31	32.64	81.90	1.54
JPC13_38	527.71	0.53	68.23	0.02	0.05	0.01	93.80	1.88	106.99	27.38	93.80	1.88
JPC13_37	296.74	0.46	74.40	0.02	0.05	0.01	86.06	1.63	103.42	34.48	86.06	1.63
JPC13_36	269.27	0.43	78.68	0.02	0.05	0.01	81.42	1.64	87.82	34.48	81.42	1.64
JPC13_35	1468.00	1.05	79.42	0.02	0.05	0.01	80.67	1.63	153.92	24.42	80.67	1.63
JPC13_34	421.62	0.51	77.55	0.02	0.05	0.01	82.60	1.55	346.86	31.94	82.60	1.55
JPC13_33	554.97	0.64	79.79	0.02	0.05	0.02	80.30	1.67	125.91	35.18	80.30	1.67
JPC13_32	373.15	0.65	76.51	0.02	0.05	0.01	83.72	1.55	101.26	31.67	83.72	1.55
JPC13_31	561.19	0.60	78.47	0.02	0.05	0.02	81.63	1.62	161.82	42.31	81.63	1.62
JPC13_30	374.58	0.59	75.51	0.02	0.05	0.01	84.81	1.57	88.84	29.09	84.81	1.57
JPC13_29	439.95	0.49	77.81	0.02	0.05	0.01	82.32	1.51	152.55	30.45	82.32	1.51
JPC13_28	446.23	0.56	77.28	0.02	0.05	0.01	82.89	1.56	124.85	29.57	82.89	1.56
JPC13_27	428.88	0.55	76.44	0.02	0.05	0.01	83.79	1.49	80.38	31.99	83.79	1.49
JPC13_26	440.28	0.64	69.84	0.02	0.05	0.01	91.64	1.75	132.98	28.98	91.64	1.75
JPC13_25	798.25	0.67	76.42	0.02	0.05	0.01	83.80	1.52	141.03	25.07	83.80	1.52
JPC13_24	460.69	0.58	74.88	0.02	0.05	0.01	85.51	1.66	275.53	27.32	85.51	1.66
JPC13_23	521.41	0.44	4.68	0.02	0.08	0.01	1248.97	19.30	1262.97	10.10	1262.97	10.10
JPC13_22	333.11	0.60	72.51	0.02	0.05	0.01	88.30	1.84	152.01	31.39	88.30	1.84
JPC13_21	365.65	0.50	76.68	0.02	0.05	0.01	83.53	1.87	213.15	32.96	83.53	1.87
JPC13_20	281.45	0.54	78.86	0.02	0.06	0.02	81.23	1.79	416.91	43.18	81.23	1.79
JPC13_19	894.94	0.88	80.88	0.02	0.05	0.01	79.22	1.60	243.39	24.44	79.22	1.60
JPC13_18	1090.34	0.33	80.98	0.02	0.06	0.02	79.12	1.75	441.48	39.06	79.12	1.75
JPC13_17	512.01	0.59	66.10	0.05	0.13	0.03	96.80	4.69	2039.69	45.21	2039.69	45.21
JPC13_16	411.70	0.47	79.59	0.02	0.06	0.03	80.49	1.65	593.70	54.38	80.49	1.65
JPC13_15	593.36	0.76	78.06	0.02	0.05	0.01	82.06	1.67	106.49	25.50	82.06	1.67
JPC13_14	3058.26	2.09	79.54	0.02	0.07	0.02	80.54	1.96	929.55	44.54	80.54	1.96
JPC13_13	675.11	0.63	79.19	0.02	0.05	0.01	80.90	1.74	139.50	31.64	80.90	1.74
JPC13_12	362.49	0.54	78.15	0.02	0.05	0.01	81.96	1.74	255.96	29.39	81.96	1.74
JPC13_11	560.71	0.64	80.54	0.02	0.05	0.01	79.55	1.65	366.01	25.42	79.55	1.65
JPC13_10	663.18	0.70	78.85	0.02	0.05	0.01	81.24	1.73	192.51	32.82	81.24	1.73
JPC13_9	1709.16	1.10	80.61	0.02	0.05	0.01	79.48	1.53	85.74	21.22	79.48	1.53
JPC13_8	467.48	0.47	74.94	0.02	0.06	0.02	85.45	1.77	646.46	37.36	85.45	1.77
JPC13_7	438.70	0.61	80.52	0.02	0.05	0.01	79.57	1.63	266.52	28.97	79.57	1.63
JPC13_6	440.70	0.51	78.08	0.03	0.05	0.02	82.04	2.27	280.19	53.63	82.04	2.27
JPC13_4	504.76	0.52	66.71	0.02	0.11	0.02	95.91	2.05	1870.26	38.58	1870.26	38.58
JPC13_3	575.40	0.70	74.63	0.02	0.05	0.01	85.80	1.79	133.43	28.42	85.80	1.79
JPC13_2	470.88	0.59	77.95	0.02	0.05	0.01	82.17	1.68	239.94	26.77	82.17	1.68
JPC13_1	383.50	0.54	56.13	0.02	0.05	0.01	113.83	2.37	402.09	31.60	113.83	2.37
PAN2_142	268.17	0.19	25.31	0.03	0.05	0.02	249.82	6.72	237.36	36.11	249.82	6.72
PAN2_141	202.05	0.28	63.53	0.03	0.05	0.03	100.67	2.90	152.63	58.32	100.67	2.90
PAN2_140	82.97	0.40	21.55	0.03	0.05	0.02	292.35	8.27	343.27	49.64	292.35	8.27
PAN2_139	412.21	0.25	6.15	0.03	0.08	0.01	970.49	22.78	1111.35	14.95	1111.35	14.95
PAN2_138	85.10	0.27	3.99	0.03	0.09	0.01	1443.02	32.98	1438.94	18.04	1438.94	18.04
PAN2_137	98.21	0.59	3.14	0.02	0.11	0.01	1783.31	37.89	1818.22	14.99	1818.22	14.99
PAN2_136	1222.96	0.15	5.92	0.02	0.08	0.01	1006.53	22.43	1150.15	13.00	1150.15	13.00
PAN2_135	378.86	0.55	6.28	0.02	0.08	0.01	952.84	21.85	1073.57	15.49	1073.57	15.49
PAN2_134	242.57	0.33	2.44	0.02	0.15	0.01	2214.08	44.95	2298.77	11.42	2298.77	11.42
PAN2_133	137.59	1.39	2.94	0.02	0.12	0.01	1889.20	39.34	1982.61	13.15	1982.61	13.15

PAN2_132	612.06	0.08	12.29	0.02	0.06	0.01	504.32	11.86	591.86	18.78	504.32	11.86
PAN2_131	139.38	0.61	1.98	0.03	0.19	0.01	2632.78	55.75	2716.86	10.93	2716.86	10.93
PAN2_130	631.64	0.23	13.09	0.02	0.06	0.01	474.50	11.25	463.80	21.39	474.50	11.25
PAN2_129	404.80	0.47	10.48	0.02	0.06	0.01	587.76	13.67	586.52	19.75	587.76	13.67
PAN2_128	54.84	1.20	5.41	0.03	0.08	0.01	1093.11	27.04	1096.45	24.96	1096.45	24.96
PAN2_127	290.10	0.32	3.77	0.02	0.10	0.01	1517.95	32.46	1529.26	13.63	1529.26	13.63
PAN2_126	32.70	1.72	4.99	0.03	0.08	0.01	1178.31	32.33	1236.05	25.43	1236.05	25.43
PAN2_125	511.87	0.15	10.06	0.03	0.07	0.01	610.78	15.67	815.12	19.33	610.78	15.67
PAN2_124	225.46	0.29	4.76	0.03	0.08	0.01	1228.71	28.03	1222.36	16.87	1222.36	16.87
PAN2_123	111.84	1.54	9.66	0.03	0.06	0.02	634.81	16.19	627.41	35.41	634.81	16.19
PAN2_122	138.51	0.50	12.74	0.03	0.06	0.02	487.24	12.76	491.26	37.88	487.24	12.76
PAN2_121	77.90	0.29	5.35	0.03	0.08	0.01	1104.66	27.46	1116.95	27.19	1116.95	27.19
PAN2_120	496.15	0.05	12.93	0.03	0.06	0.01	480.08	11.80	480.62	24.40	480.08	11.80
PAN2_119	150.83	1.03	23.59	0.03	0.05	0.02	267.65	7.33	279.98	47.53	267.65	7.33
PAN2_118	77.08	0.30	7.29	0.03	0.07	0.02	829.02	20.86	830.69	34.30	829.02	20.86
PAN2_117	123.91	0.17	10.73	0.03	0.06	0.02	574.50	14.49	573.78	33.66	574.50	14.49
PAN2_116	326.89	0.34	7.77	0.03	0.07	0.01	780.53	18.56	896.42	18.84	780.53	18.56
PAN2_115	767.72	0.22	25.36	0.03	0.05	0.01	249.27	6.16	263.67	26.34	249.27	6.16
PAN2_114	259.34	0.40	5.65	0.03	0.07	0.01	1050.25	24.88	1066.13	19.43	1066.13	19.43
PAN2_113	76.28	0.50	3.18	0.03	0.11	0.01	1762.69	43.25	1778.06	16.70	1778.06	16.70
PAN2_112	159.90	1.01	12.38	0.04	0.06	0.01	500.69	17.21	497.05	32.58	500.69	17.21
PAN2_111	105.10	1.22	2.01	0.04	0.18	0.01	2604.49	75.95	2654.98	10.89	2654.98	10.89
PAN2_110	591.32	0.03	11.47	0.03	0.06	0.01	538.97	17.98	542.05	18.52	538.97	17.98
PAN2_109	615.80	0.21	8.26	0.04	0.07	0.01	736.81	24.91	787.08	14.62	736.81	24.91
PAN2_108	104.53	0.47	22.27	0.04	0.05	0.04	283.20	11.61	264.47	79.42	283.20	11.61
PAN2_107	80.16	0.29	5.06	0.04	0.08	0.01	1163.00	40.07	1165.55	22.31	1165.55	22.31
PAN2_106	61.45	0.23	6.43	0.04	0.07	0.01	932.05	33.06	976.72	29.80	976.72	29.80
PAN2_105	341.02	0.34	6.56	0.04	0.07	0.01	915.22	30.36	941.52	15.64	941.52	15.64
PAN2_104	261.90	0.48	11.53	0.04	0.06	0.01	536.14	19.09	525.51	23.57	536.14	19.09
PAN2_103	373.81	0.49	12.95	0.04	0.06	0.01	479.58	16.32	463.93	23.80	479.58	16.32
PAN2_102	194.02	0.30	5.29	0.04	0.08	0.01	1116.05	38.55	1108.38	16.84	1108.38	16.84
PAN2_101	78.04	0.72	4.86	0.04	0.08	0.01	1206.37	38.98	1247.02	19.41	1247.02	19.41
PAN2_100	295.67	0.18	6.03	0.04	0.07	0.01	989.22	32.72	1046.83	14.19	1046.83	14.19
PAN2_99	118.69	0.52	10.24	0.05	0.06	0.02	600.51	28.65	575.26	36.66	600.51	28.65
PAN2_98	25.69	0.36	4.17	0.04	0.09	0.02	1385.54	50.39	1388.26	31.72	1388.26	31.72
PAN2_97	348.45	0.33	11.20	0.04	0.06	0.01	551.28	18.69	553.01	21.45	551.28	18.69
PAN2_96	346.78	0.24	8.33	0.04	0.07	0.01	730.73	24.39	897.19	17.93	730.73	24.39
PAN2_95	288.87	0.37	11.84	0.04	0.06	0.01	522.53	17.64	555.25	22.06	522.53	17.64
PAN2_94	207.97	0.46	6.84	0.04	0.07	0.01	879.31	28.80	934.28	16.40	934.28	16.40
PAN2_93	476.13	0.49	23.18	0.04	0.05	0.01	272.24	9.43	372.92	25.62	272.24	9.43
PAN2_92	152.85	0.26	4.86	0.02	0.08	0.01	1205.11	19.40	1207.51	12.21	1207.51	12.21
PAN2_91	292.44	1.92	12.20	0.02	0.06	0.01	507.84	8.43	497.41	16.47	507.84	8.43
PAN2_90	683.37	0.96	11.36	0.02	0.06	0.01	543.80	8.81	544.26	13.20	543.80	8.81
PAN2_89	362.60	0.26	3.71	0.02	0.09	0.01	1536.88	24.32	1523.76	10.66	1523.76	10.66
PAN2_88	420.01	0.50	4.95	0.02	0.08	0.01	1186.25	18.24	1230.12	12.16	1230.12	12.16
PAN2_87	98.69	1.07	3.33	0.02	0.11	0.01	1693.28	27.85	1720.36	10.67	1720.36	10.67
PAN2_86	693.94	0.42	11.49	0.02	0.06	0.01	537.92	8.80	526.83	12.85	537.92	8.80
PAN2_85	661.98	0.30	11.78	0.02	0.06	0.01	525.26	9.57	544.72	13.63	525.26	9.57
PAN2_84	1385.33	1.60	11.67	0.02	0.06	0.01	529.92	8.47	546.52	11.25	529.92	8.47
PAN2_83	774.96	0.73	12.71	0.02	0.06	0.01	488.15	7.93	500.50	12.99	488.15	7.93
PAN2_82	581.14	0.48	5.55	0.02	0.08	0.01	1068.28	16.76	1184.64	10.24	1184.64	10.24
PAN2_81	1277.89	0.44	12.96	0.02	0.06	0.01	479.18	7.91	471.24	11.86	479.18	7.91
PAN2_80	174.95	1.07	4.91	0.02	0.08	0.01	1194.81	19.18	1190.99	11.95	1190.99	11.95
PAN2_79	241.57	1.53	10.61	0.02	0.06	0.01	580.81	9.91	625.21	15.50	580.81	9.91
PAN2_78	337.10	0.92	6.75	0.02	0.07	0.00	890.82	13.40	885.18	9.04	885.18	13.40
PAN2_77	649.84	0.81	22.73	0.02	0.05	0.01	277.59	4.49	289.11	17.88	277.59	4.49
PAN2_76	438.35	0.58	4.76	0.02	0.08	0.00	1228.71	20.44	1226.18	9.65	1226.18	9.65
PAN2_75	1099.88	0.73	24.73	0.02	0.06	0.02	255.54	5.57	601.70	34.34	255.54	5.57
PAN2_74	65.33	0.50	4.84	0.02	0.08	0.01	1210.74	19.78	1256.73	14.33	1256.73	14.33
PAN2_73	607.97	0.41	6.38	0.02	0.07	0.00	938.03	16.36	1007.40	8.64	1007.40	8.64
PAN2_72	390.83	0.68	4.80	0.02	0.08	0.00	1220.76	17.50	1192.00	8.47	1192.00	8.47
PAN2_71	360.46	1.48	5.23	0.02	0.08	0.00	1128.07	16.28	1093.43	8.37	1093.43	8.37
PAN2_70	125.70	0.34	4.33	0.02	0.09	0.01	1339.47	19.64	1320.59	10.21	1320.59	10.21
PAN2_69	227.75	0.49	18.38	0.02	0.05	0.01	341.58	5.44	373.57	21.09	341.58	5.44
PAN2_68	346.20	0.30	6.59	0.02	0.07	0.01	911.18	20.77	1032.74	12.56	1032.74	12.56
PAN2_67	739.09	1.41	11.43	0.02	0.06	0.00	540.78	8.06	579.99	10.34	540.78	8.06
PAN2_66	155.77	0.56	18.03	0.02	0.05	0.01	347.89	6.07	348.42	25.22	347.89	6.07
PAN2_65	521.41	0.02	6.05	0.02	0.07	0.00	985.39	14.46	1034.68	8.20	1034.68	8.20
PAN2_64	100.05	1.40	3.72	0.02	0.11	0.01	1536.36	33.67	1785.22	9.86	1785.22	9.86
PAN2_63	970.73	0.43	5.41	0.02	0.07	0.00	1092.79	16.81	1059.44	8.02	1059.44	8.02
PAN2_62	373.24	0.79	11.56	0.02	0.06	0.01	534.89	8.39	557.90	12.33	534.89	8.39

PAN2_61	297.86	1.41	10.97	0.02	0.06	0.01	562.44	9.20	640.18	15.46	562.44	9.20
PAN2_60	998.49	0.03	10.78	0.02	0.06	0.01	571.97	9.67	587.72	11.90	571.97	9.67
PAN2_59	132.82	0.97	2.16	0.02	0.21	0.00	2454.48	35.66	2886.00	6.01	2886.00	6.01
PAN2_58	1267.96	0.09	18.68	0.02	0.05	0.01	336.17	5.52	409.22	13.03	336.17	5.52
PAN2_57	380.37	0.66	9.91	0.02	0.06	0.01	619.66	9.23	642.64	16.15	619.66	9.23
PAN2_56	237.37	0.64	18.72	0.02	0.05	0.01	335.51	5.58	341.75	21.17	335.51	5.58
PAN2_55	156.19	0.50	23.25	0.02	0.05	0.01	271.45	4.77	291.06	23.28	271.45	4.77
PAN2_54	365.11	0.43	60.56	0.02	0.05	0.02	105.58	1.96	281.02	35.65	105.58	1.96
PAN2_53	472.19	0.21	5.07	0.02	0.08	0.01	1161.27	23.21	1250.96	22.29	1250.96	22.29
PAN2_52	271.24	0.48	9.50	0.02	0.07	0.01	645.36	11.10	797.25	29.94	645.36	11.10
PAN2_51	152.37	0.58	19.05	0.02	0.05	0.01	329.82	5.51	363.49	21.83	329.82	5.51
PAN2_50	88.30	1.13	25.54	0.02	0.05	0.02	247.59	4.82	342.14	34.52	247.59	4.82
PAN2_49	453.95	1.21	13.43	0.02	0.06	0.01	462.92	7.30	543.29	14.02	462.92	7.30
PAN2_48	180.95	0.57	5.23	0.02	0.08	0.01	1127.29	17.52	1094.08	11.47	1094.08	11.47
PAN2_47	868.84	0.31	4.24	0.02	0.15	0.00	1363.81	19.69	2384.09	6.64	2384.09	6.64
PAN2_46	548.55	1.27	9.14	0.02	0.06	0.00	669.44	10.59	655.66	10.28	669.44	10.59
PAN2_45	264.50	0.63	5.58	0.02	0.08	0.01	1062.81	15.99	1175.25	12.83	1175.25	12.83
PAN2_44	523.89	0.36	5.43	0.02	0.07	0.00	1089.62	15.68	1038.09	8.33	1038.09	8.33
PAN2_43	221.83	0.78	5.19	0.02	0.08	0.01	1135.46	18.27	1137.46	11.36	1137.46	11.36
PAN2_42	191.31	0.13	4.37	0.02	0.09	0.01	1328.27	22.06	1340.68	9.71	1340.68	9.71
PAN2_41	167.15	0.81	18.73	0.02	0.05	0.01	335.36	6.21	323.92	30.10	335.36	6.21
PAN2_40	882.92	0.45	15.82	0.02	0.06	0.00	395.13	7.54	535.11	9.95	395.13	7.54
PAN2_39	482.55	0.46	6.08	0.02	0.08	0.00	980.85	14.04	1102.85	9.79	1102.85	9.79
PAN2_38	128.64	0.64	22.86	0.02	0.06	0.01	276.02	5.91	606.46	25.23	276.02	5.91
PAN2_37	412.05	0.33	59.84	0.02	0.05	0.01	106.83	1.65	134.92	26.59	106.83	1.65
PAN2_36	128.67	0.55	6.88	0.01	0.07	0.01	874.86	11.87	940.44	12.12	940.44	12.12
PAN2_35	1374.04	0.18	26.32	0.02	0.05	0.01	240.39	3.62	257.76	13.33	240.39	3.62
PAN2_34	361.90	0.64	4.82	0.01	0.08	0.00	1215.88	15.76	1276.58	8.65	1276.58	8.65
PAN2_33	688.08	0.21	4.78	0.01	0.08	0.00	1224.29	15.73	1238.55	7.21	1238.55	7.21
PAN2_32	323.25	0.43	13.28	0.01	0.06	0.01	467.87	6.20	478.00	13.73	467.87	6.20
PAN2_31	#####	0.04	11.46	0.02	0.06	0.01	539.26	9.10	559.73	11.27	539.26	9.10
PAN2_30	604.78	0.32	25.07	0.01	0.05	0.01	252.18	3.47	315.71	13.90	252.18	3.47
PAN2_29	458.25	0.45	2.53	0.01	0.14	0.00	2143.94	24.81	2164.85	4.72	2164.85	4.72
PAN2_28	166.15	0.49	4.78	0.01	0.08	0.00	1225.23	15.82	1258.46	9.24	1258.46	9.24
PAN2_27	289.88	0.80	11.73	0.01	0.06	0.01	527.27	7.27	589.09	14.95	527.27	7.27
PAN2_26	414.59	0.85	24.33	0.01	0.05	0.01	259.70	3.75	382.16	19.10	259.70	3.75
PAN2_25	982.26	0.33	61.92	0.01	0.05	0.01	103.27	1.44	114.81	17.68	103.27	1.44
PAN2_24	189.62	1.05	10.29	0.01	0.06	0.01	597.94	8.15	682.75	15.29	597.94	8.15
PAN2_23	659.30	0.22	11.10	0.02	0.06	0.00	555.94	8.60	527.27	10.20	555.94	8.60
PAN2_22	361.80	0.96	24.23	0.01	0.05	0.01	260.70	3.65	290.80	16.66	260.70	3.65
PAN2_21	184.53	1.22	4.57	0.01	0.08	0.00	1276.62	16.54	1216.47	9.03	1216.47	9.03
PAN2_20	975.59	0.13	7.01	0.01	0.07	0.00	860.21	10.92	989.17	6.74	989.17	6.74
PAN2_19	144.05	0.87	5.07	0.01	0.08	0.01	1161.03	15.03	1218.42	10.92	1218.42	10.92
PAN2_18	1308.95	0.81	11.86	0.01	0.06	0.00	521.66	6.75	515.24	7.30	521.66	6.75
PAN2_17	1042.00	0.48	3.43	0.01	0.11	0.00	1648.58	19.72	1760.52	5.09	1760.52	5.09
PAN2_16	938.12	0.11	25.69	0.02	0.05	0.01	246.21	3.62	268.82	12.25	246.21	3.62
PAN2_15	1309.67	0.31	5.13	0.01	0.08	0.00	1147.76	14.04	1142.54	6.03	1142.54	6.03
PAN2_14	144.72	0.47	6.83	0.01	0.07	0.01	880.24	11.93	946.27	12.31	946.27	12.31
PAN2_13	972.08	0.99	25.31	0.01	0.05	0.01	249.78	3.37	265.92	11.88	249.78	3.37
PAN2_12	143.21	0.60	5.73	0.01	0.07	0.01	1037.23	13.76	1064.78	10.39	1064.78	10.39
PAN2_11	228.03	0.53	2.62	0.01	0.13	0.00	2086.10	24.32	2152.60	5.27	2152.60	5.27
PAN2_10	829.80	0.15	9.15	0.01	0.06	0.00	668.54	9.25	691.34	7.26	668.54	9.25
PAN2_9	153.53	0.50	6.19	0.02	0.07	0.01	965.16	14.91	1012.88	18.45	1012.88	18.45
PAN2_8	1035.75	0.41	7.90	0.05	0.08	0.00	768.61	39.10	1226.87	7.55	1226.87	7.55
PAN2_7	1114.95	0.29	10.54	0.02	0.06	0.01	584.05	9.30	721.52	11.45	584.05	9.30
PAN2_6	506.00	0.45	62.63	0.01	0.05	0.01	102.11	1.50	141.00	22.04	102.11	1.50
PAN2_5	337.23	0.30	5.21	0.01	0.08	0.00	1132.24	14.97	1198.89	7.17	1198.89	7.17
PAN2_4	336.30	0.41	7.79	0.01	0.07	0.00	778.15	10.28	837.58	9.45	778.15	10.28
PAN2_3	304.92	0.32	9.66	0.01	0.06	0.01	635.17	8.75	638.07	10.91	635.17	8.75
PAN2_2	108.45	0.89	5.85	0.01	0.07	0.01	1016.77	13.95	955.84	13.03	955.84	13.03
PAN2_1	23.54	0.66	8.24	0.02	0.06	0.02	738.17	13.13	702.97	32.83	738.17	13.13
PAN-1_211	140.09	2.51	782.01	70.73	0.07	2.87	782.01	70.73	933.83	58.86	782.01	70.73
PAN-1_210	215.36	0.75	540.88	24.98	0.06	2.22	540.88	24.98	503.56	48.81	540.88	24.98
PAN-1_209	54.14	1.77	582.21	16.14	0.06	3.76	582.21	16.14	492.29	83.03	582.21	16.14
PAN-1_208	126.70	2.04	####	26.54	0.07	0.93	1043.75	26.54	1026.64	18.79	1026.64	18.79
PAN-1_207	104.18	2.30	####	13.39	0.08	1.51	1124.42	13.39	1169.03	29.93	1169.03	29.93
PAN-1_206	53.33	0.88	####	15.00	0.08	3.26	1213.90	15.00	1172.27	64.63	1172.27	64.63
PAN-1_205	125.72	1.05	1301.72	7.63	0.08	1.12	1301.72	7.63	1308.96	21.68	1308.96	21.68
PAN-1_204	82.81	1.54	1152.24	7.68	0.08	1.91	1152.24	7.68	1225.98	37.45	1225.98	37.45
PAN-1_203	350.82	2.20	####	42.47	0.08	0.95	1057.98	42.47	1108.91	19.04	1108.91	19.04

PAN-1_202	98.45	5.86	599.73	10.27	0.06	2.18	599.73	10.27	564.49	47.49	599.73	10.27
PAN-1_201	197.12	3.15	927.08	5.00	0.07	0.46	927.08	5.00	906.42	9.42	906.42	9.42
PAN-1_200	85.70	2.28	604.88	7.64	0.06	4.52	604.88	7.64	597.01	98.01	604.88	7.64
PAN-1_199	340.39	1.07	237.18	3.03	0.05	2.48	237.18	3.03	258.79	56.94	237.18	3.03
PAN-1_198	162.73	6.44	241.42	4.88	0.05	8.45	241.42	4.88	363.24	190.87	241.42	4.88
PAN-1_197	210.51	1.18	1172.12	32.06	0.08	0.75	1172.12	32.06	1143.53	14.81	1143.53	14.81
PAN-1_196	60.52	1.59	####	10.95	0.08	3.11	1023.96	10.95	1111.55	62.16	1111.55	62.16
PAN-1_195	143.60	0.97	383.21	16.08	0.05	4.24	383.21	16.08	411.12	94.77	383.21	16.08
PAN-1_194	52.83	2.63	####	14.20	0.09	1.38	1309.76	14.20	1349.47	26.63	1349.47	26.63
PAN-1_193	347.56	24.41	####	10.37	0.07	0.24	1025.23	10.37	1006.31	4.84	1006.31	4.84
PAN-1_192	165.82	1.16	267.10	2.68	0.05	8.43	267.10	2.68	262.21	193.84	267.10	2.68
PAN-1_191	257.35	1.35	256.82	4.51	0.05	3.51	256.82	4.51	292.47	80.11	256.82	4.51
PAN-1_190	252.01	1.02	241.45	1.83	0.05	4.43	241.45	1.83	231.38	102.40	241.45	1.83
PAN-1_189	137.00	2.26	####	5.29	0.08	0.87	1096.95	5.29	1135.41	17.26	1135.41	17.26
PAN-1_188	83.94	1.89	303.73	4.94	0.05	9.77	303.73	4.94	110.68	231.01	303.73	4.94
PAN-1_187	126.56	2.02	####	18.03	0.07	0.51	1043.88	18.03	1043.40	10.23	1043.40	10.23
PAN-1_186	47.39	0.74	500.44	15.13	0.06	11.12	500.44	15.13	531.75	244.13	500.44	15.13
PAN-1_185	97.93	2.50	939.62	7.16	0.07	1.43	939.62	7.16	949.70	29.22	949.70	29.22
PAN-1_184	108.78	1.93	####	30.99	0.07	1.49	1034.61	30.99	1038.61	30.07	1038.61	30.07
PAN-1_183	155.29	3.28	654.98	15.11	0.06	1.32	654.98	15.11	665.26	28.26	654.98	15.11
PAN-1_182	105.45	1.90	534.47	4.79	0.06	2.76	534.47	4.79	561.34	60.20	534.47	4.79
PAN-1_181	57.53	0.85	517.61	15.06	0.05	4.12	517.61	15.06	346.52	93.22	517.61	15.06
PAN-1_180	122.98	2.34	####	24.24	0.12	0.58	1806.14	24.24	1893.88	10.40	1893.88	10.40
PAN-1_179	293.72	13.05	235.13	3.20	0.05	4.83	235.13	3.20	231.91	111.56	235.13	3.20
PAN-1_178	66.60	1.63	####	10.86	0.07	2.45	1020.49	10.86	1051.23	49.30	1051.23	49.30
PAN-1_177	236.37	2.07	1173.56	8.09	0.08	0.46	1173.56	8.09	1185.50	9.15	1185.50	9.15
PAN-1_176	84.47	0.88	274.57	6.95	0.06	10.35	274.57	6.95	437.66	230.92	274.57	6.95
PAN-1_175	218.06	0.41	909.92	16.54	0.07	0.77	909.92	16.54	968.19	15.68	968.19	15.68
PAN-1_174	85.30	1.87	####	17.53	0.07	2.16	1043.88	17.53	1042.80	43.61	1042.80	43.61
PAN-1_173	305.62	8.13	254.86	17.45	0.06	2.80	254.86	17.45	561.33	61.08	254.86	17.45
PAN-1_172	296.05	4.26	1161.91	12.45	0.08	0.44	1161.91	12.45	1117.43	8.79	1117.43	8.79
PAN-1_171	396.31	1.47	####	26.91	0.11	0.62	1506.96	26.91	1803.56	11.25	1803.56	11.25
PAN-1_170	104.84	1.68	####	18.68	0.08	1.08	1183.06	18.68	1184.72	21.31	1184.72	21.31
PAN-1_169	167.56	2.47	243.50	8.47	0.05	6.07	243.50	8.47	190.61	141.27	243.50	8.47
PAN-1_168	73.65	1.59	####	46.17	0.12	0.66	1950.69	46.17	1985.16	11.74	1985.16	11.74
PAN-1_167	87.66	2.52	####	21.94	0.08	1.24	1280.02	21.94	1222.06	24.28	1222.06	24.28
PAN-1_166	125.17	3.09	####	13.80	0.08	0.68	1226.10	13.80	1244.50	13.29	1244.50	13.29
PAN-1_165	39.61	2.40	785.90	25.65	0.07	2.77	785.90	25.65	968.91	56.57	785.90	25.65
PAN-1_164	207.93	4.11	249.97	3.73	0.05	5.41	249.97	3.73	304.99	123.31	249.97	3.73
PAN-1_163	391.00	3.74	334.95	8.30	0.06	1.69	334.95	8.30	470.34	37.44	334.95	8.30
PAN-1_162	411.62	2.43	####	26.51	0.08	0.45	1063.91	26.51	1071.49	9.12	1071.49	9.12
PAN-1_161	47.71	0.91	545.27	6.37	0.06	8.43	545.27	6.37	416.20	188.73	545.27	6.37
PAN-1_160	92.12	1.97	1160.76	8.23	0.08	1.73	1160.76	8.23	1191.53	34.24	1191.53	34.24
PAN-1_159	73.97	1.13	273.90	5.50	0.05	9.36	273.90	5.50	225.15	216.82	273.90	5.50
PAN-1_158	29.79	3.99	####	14.53	0.08	4.04	1227.78	14.53	1210.50	79.57	1210.50	79.57
PAN-1_157	235.23	1.35	583.98	7.84	0.06	0.96	583.98	7.84	576.13	20.83	583.98	7.84
PAN-1_156	116.15	3.28	908.65	33.81	0.07	1.36	908.65	33.81	985.41	27.64	985.41	27.64
PAN-1_155	60.50	1.99	1168.47	13.02	0.08	1.85	1168.47	13.02	1152.40	36.74	1152.40	36.74
PAN-1_154	218.05	1.35	####	8.65	0.11	0.28	1840.59	8.65	1878.94	5.06	1878.94	5.06
PAN-1_153	156.61	1.37	318.55	12.68	0.05	7.81	318.55	12.68	353.28	176.67	318.55	12.68
PAN-1_152	282.34	1.17	250.37	1.98	0.05	2.78	250.37	1.98	267.23	63.75	250.37	1.98
PAN-1_151	84.54	1.57	237.58	6.99	0.05	7.02	237.58	6.99	193.63	163.40	237.58	6.99
PAN-1_150	137.04	1.98	152.17	2.18	0.05	17.50	152.17	2.18	-53.79	429.03	152.17	2.18
PAN-1_149	150.48	2.16	1400.11	5.24	0.09	0.45	1400.11	5.24	1450.14	8.56	1450.14	8.56
PAN-1_148	245.71	1.21	261.13	2.80	0.05	3.92	261.13	2.80	209.29	90.87	261.13	2.80
PAN-1_147	225.54	0.83	280.25	2.97	0.05	3.06	280.25	2.97	309.44	69.66	280.25	2.97
PAN-1_146	191.73	5.20	516.04	4.82	0.06	2.45	516.04	4.82	535.45	53.54	516.04	4.82
PAN-1_145	263.93	1.24	255.08	9.29	0.05	6.08	255.08	9.29	273.27	139.53	255.08	9.29
PAN-1_144	356.37	2.99	266.20	12.88	0.05	2.48	266.20	12.88	267.23	56.98	266.20	12.88
PAN-1_143	170.56	0.80	618.77	10.24	0.06	1.28	618.77	10.24	593.31	27.67	618.77	10.24
PAN-1_142	126.98	1.18	880.91	19.01	0.07	1.04	880.91	19.01	999.51	21.21	999.51	21.21
PAN-1_141	154.43	1.66	982.91	39.66	0.07	1.02	982.91	39.66	1016.73	20.58	1016.73	20.58
PAN-1_140	150.26	3.39	573.25	13.22	0.06	1.56	573.25	13.22	599.63	33.70	573.25	13.22
PAN-1_139	673.83	14.52	237.84	11.80	0.05	2.22	237.84	11.80	295.35	50.74	237.84	11.80
PAN-1_138	167.54	0.97	1877.25	54.87	0.12	0.42	1877.25	54.87	1886.95	7.48	1886.95	7.48
PAN-1_137	92.35	1.84	157.84	5.78	0.05	8.23	157.84	5.78	236.94	190.08	157.84	5.78
PAN-1_136	326.99	2.52	320.25	19.53	0.06	2.17	320.25	19.53	469.70	48.11	320.25	19.53
PAN-1_135	33.40	1.16	1205.16	21.62	0.08	3.15	1205.16	21.62	1233.26	61.80	1233.26	61.80
PAN-1_134	88.37	1.22	276.38	9.88	0.06	6.91	276.38	9.88	412.59	154.65	276.38	9.88
PAN-1_133	394.09	9.52	697.41	66.36	0.07	0.68	697.41	66.36	813.45	14.24	697.41	66.36
PAN-1_132	31.29	1.61	####	24.13	0.13	0.88	2138.18	24.13	2153.18	15.42	2153.18	15.42

PAN-1_131	385.15	10.08	863.51	30.14	0.07	1.54	863.51	30.14	976.57	31.40	976.57	31.40
PAN-1_130	320.70	3.18	237.58	2.43	0.05	3.55	237.58	2.43	230.88	81.89	237.58	2.43
PAN-1_129	477.14	1.71	250.58	3.13	0.05	1.88	250.58	3.13	205.66	43.73	250.58	3.13
PAN-1_128	107.42	1.26	160.33	5.79	0.05	13.92	160.33	5.79	110.11	329.99	160.33	5.79
PAN-1_127	116.26	2.14	245.74	11.22	0.05	6.01	245.74	11.22	231.43	138.82	245.74	11.22
PAN-1_126	165.71	41.20	229.69	19.60	0.05	5.84	229.69	19.60	272.67	133.89	229.69	19.60
PAN-1_125	130.74	1.75	285.71	5.15	0.05	6.76	285.71	5.15	290.81	154.65	285.71	5.15
PAN-1_124	20.34	1.42	1105.38	24.96	0.08	7.90	1105.38	24.96	1240.26	155.03	1240.26	155.03
PAN-1_123	134.96	0.33	438.17	10.95	0.06	1.04	438.17	10.95	477.60	22.90	438.17	10.95
PAN-1_122	99.64	25.44	549.45	13.39	0.06	2.57	549.45	13.39	516.58	56.41	549.45	13.39
PAN-1_121	165.16	1.43	####	79.00	0.19	0.43	2654.83	79.00	2741.91	7.10	2741.91	7.10
PAN-1_120	257.07	2.38	####	12.66	0.09	0.55	1437.46	12.66	1483.51	10.44	1483.51	10.44
PAN-1_119	84.72	1.00	614.41	6.90	0.06	3.04	614.41	6.90	598.78	65.84	614.41	6.90
PAN-1_118	221.08	1.52	255.60	4.38	0.05	3.18	255.60	4.38	206.19	73.79	255.60	4.38
PAN-1_117	41.39	0.35	6.10	0.02	0.07	0.01	978.60	15.95	991.38	24.54	991.38	24.54
PAN-1_116	69.21	0.35	6.19	0.02	0.07	0.01	965.66	14.90	1051.84	16.08	1051.84	16.08
PAN-1_115	233.73	0.72	12.82	0.02	0.06	0.01	484.26	7.34	462.71	19.58	484.26	7.34
PAN-1_114	369.44	0.65	13.66	0.02	0.06	0.01	455.49	6.84	483.93	17.14	455.49	6.84
PAN-1_113	82.21	0.52	20.75	0.02	0.05	0.02	303.41	5.48	322.55	36.15	303.41	5.48
PAN-1_112	161.41	0.74	5.35	0.02	0.08	0.01	1104.75	16.00	1107.56	14.81	1107.56	14.81
PAN-1_111	119.89	0.61	11.94	0.02	0.06	0.01	518.45	8.00	580.36	24.11	518.45	8.00
PAN-1_110	106.73	0.93	21.88	0.02	0.06	0.01	288.05	5.55	428.13	27.18	288.05	5.55
PAN-1_109	423.53	1.10	25.88	0.02	0.05	0.01	244.43	3.81	270.64	23.96	244.43	3.81
PAN-1_108	13.88	0.40	15.28	0.03	0.06	0.03	408.70	10.20	662.07	69.17	408.70	10.20
PAN-1_107	525.76	0.93	23.57	0.02	0.06	0.01	267.85	4.24	470.99	22.75	267.85	4.24
PAN-1_106	238.97	0.86	3.76	0.02	0.09	0.01	1522.02	20.63	1496.14	10.38	1496.14	10.38
PAN-1_105	339.59	0.69	40.99	0.02	0.05	0.01	155.38	2.53	186.87	28.14	155.38	2.53
PAN-1_104	353.92	0.45	26.18	0.02	0.05	0.01	241.69	4.58	254.18	22.00	241.69	4.58
PAN-1_103	127.62	1.25	36.08	0.02	0.05	0.02	176.25	3.59	202.85	37.25	176.25	3.59
PAN-1_102	397.60	0.48	26.89	0.02	0.05	0.01	235.35	4.35	227.02	21.81	235.35	4.35
PAN-1_101	397.60	0.48	26.89	0.02	0.05	0.01	235.35	4.35	227.02	21.81	235.35	4.35
PAN-1_100	142.60	0.18	11.15	0.02	0.06	0.01	553.80	10.16	540.38	23.53	553.80	10.16
PAN-1_99	378.22	0.51	25.50	0.02	0.05	0.01	247.97	4.67	219.49	22.03	247.97	4.67
PAN-1_98	97.10	1.05	34.39	0.02	0.05	0.02	184.77	3.89	266.25	46.07	184.77	3.89
PAN-1_97	260.87	0.70	20.88	0.02	0.05	0.01	301.52	5.68	267.61	21.87	301.52	5.68
PAN-1_96	101.67	0.83	31.67	0.02	0.05	0.02	200.43	4.40	239.44	42.67	200.43	4.40
PAN-1_95	249.98	0.89	23.63	0.02	0.05	0.01	267.16	5.11	296.00	23.23	267.16	5.11
PAN-1_94	1508.14	0.04	26.02	0.02	0.05	0.01	243.07	4.39	255.91	13.93	243.07	4.39
PAN-1_93	400.18	0.74	22.79	0.02	0.05	0.01	276.85	5.24	304.05	18.00	276.85	5.24
PAN-1_92	124.19	0.82	3.59	0.02	0.10	0.01	1583.12	26.39	1606.19	9.36	1606.19	9.36
PAN-1_91	288.65	0.71	34.67	0.02	0.05	0.01	183.30	3.66	186.55	30.02	183.30	3.66
PAN-1_90	82.07	0.37	4.53	0.02	0.08	0.01	1286.88	22.31	1270.37	14.74	1270.37	14.74
PAN-1_89	243.16	0.40	25.31	0.02	0.05	0.01	249.77	4.88	317.27	23.13	249.77	4.88
PAN-1_88	133.56	0.33	6.33	0.02	0.07	0.01	945.87	16.73	995.63	14.61	995.63	14.61
PAN-1_87	224.13	0.92	10.19	0.02	0.06	0.01	603.25	10.96	622.22	17.14	603.25	10.96
PAN-1_86	225.97	0.38	6.30	0.02	0.07	0.01	949.49	16.84	1028.53	11.73	1028.53	11.73
PAN-1_85	69.41	0.65	22.84	0.02	0.05	0.02	276.25	5.88	265.95	51.78	276.25	5.88
PAN-1_84	393.01	0.16	22.85	0.03	0.07	0.01	276.15	7.02	989.60	12.39	276.15	7.02
PAN-1_83	137.25	0.47	6.82	0.02	0.07	0.01	882.29	17.58	1011.77	14.87	1011.77	14.87
PAN-1_82	195.82	0.47	10.60	0.02	0.06	0.01	581.25	10.58	605.17	17.40	581.25	10.58
PAN-1_81	55.31	0.28	4.80	0.02	0.08	0.01	1220.18	21.63	1223.47	18.81	1223.47	18.81
PAN-1_80	128.29	0.81	24.69	0.02	0.06	0.01	255.93	5.05	418.45	30.99	255.93	5.05
PAN-1_79	591.55	0.41	25.43	0.02	0.05	0.01	248.63	4.61	245.60	15.95	248.63	4.61
PAN-1_78	147.19	0.79	37.57	0.02	0.05	0.02	169.35	3.57	151.29	38.82	169.35	3.57
PAN-1_77	960.31	0.32	20.29	0.02	0.05	0.01	310.19	5.63	328.46	12.86	310.19	5.63
PAN-1_76	225.05	0.31	26.00	0.02	0.05	0.01	243.25	4.56	248.34	29.66	243.25	4.56
PAN-1_75	210.25	0.26	6.11	0.02	0.09	0.01	976.79	17.07	1352.14	12.35	1352.14	12.35
PAN-1_74	210.82	0.63	2.64	0.02	0.13	0.00	2069.48	32.90	2044.19	7.34	2044.19	7.34
PAN-1_73	97.01	1.50	4.98	0.02	0.08	0.01	1180.01	20.76	1180.26	15.07	1180.26	15.07
PAN-1_72	157.80	1.02	22.61	0.01	0.05	0.01	278.95	3.73	286.76	31.48	278.95	3.73
PAN-1_71	440.85	0.78	22.87	0.01	0.05	0.01	275.93	3.45	275.53	20.03	275.93	3.45
PAN-1_70	511.09	0.64	10.76	0.01	0.06	0.01	572.78	6.73	598.42	13.15	572.78	6.73
PAN-1_69	387.13	0.83	5.90	0.01	0.07	0.01	1010.07	11.40	1047.64	11.37	1047.64	11.37
PAN-1_68	214.62	0.26	3.45	0.01	0.10	0.01	1641.85	17.54	1623.73	9.72	1623.73	9.72
PAN-1_67	210.93	0.35	6.05	0.01	0.07	0.01	986.68	11.35	1010.41	12.30	1010.41	12.30
PAN-1_66	174.31	0.52	5.81	0.01	0.08	0.01	1023.76	12.03	1131.83	12.59	1131.83	12.59
PAN-1_65	120.47	0.46	2.13	0.01	0.16	0.01	2481.65	26.33	2461.51	8.65	2461.51	8.65
PAN-1_64	144.48	0.49	5.63	0.01	0.07	0.01	1054.27	12.13	1034.30	14.77	1034.30	14.77
PAN-1_63	115.96	0.63	11.60	0.01	0.06	0.01	533.04	7.01	508.98	23.53	533.04	7.01
PAN-1_62	157.12	0.28	11.12	0.01	0.06	0.01	554.88	6.75	601.34	18.94	554.88	6.75
PAN-1_61	146.65	0.33	9.97	0.01	0.06	0.01	616.33	7.65	620.93	19.51	616.33	7.65

PAN-1_60	94.84	0.90	23.94	0.01	0.05	0.02	263.84	3.76	218.08	42.00	263.84	3.76
PAN-1_59	230.82	0.73	23.68	0.01	0.05	0.01	266.69	3.46	268.66	27.25	266.69	3.46
PAN-1_58	197.32	0.35	4.85	0.01	0.08	0.01	1207.78	14.76	1252.85	13.11	1252.85	13.11
PAN-1_57	230.62	0.33	4.15	0.01	0.08	0.01	1390.99	15.66	1309.96	11.53	1309.96	11.53
PAN-1_56	153.30	0.39	25.26	0.02	0.05	0.03	250.29	4.80	340.66	58.80	250.29	4.80
PAN-1_55	80.33	0.66	5.08	0.02	0.08	0.01	1158.42	18.05	1172.09	16.29	1172.09	16.29
PAN-1_54	113.75	0.44	1.91	0.01	0.20	0.00	2710.05	29.87	2794.79	8.12	2794.79	8.12
PAN-1_53	153.87	0.72	22.40	0.02	0.06	0.02	281.53	4.41	720.47	32.13	281.53	4.41
PAN-1_52	143.09	0.60	59.34	0.02	0.12	0.04	107.72	1.88	1884.40	62.92	1884.40	62.92
PAN-1_51	333.70	0.46	26.03	0.01	0.05	0.01	243.04	3.17	235.48	25.90	243.04	3.17
PAN-1_50	118.89	0.97	5.43	0.01	0.08	0.01	1090.27	13.00	1119.19	14.48	1119.19	14.48
PAN-1_49	167.71	0.97	23.01	0.01	0.05	0.01	274.18	3.62	298.94	30.21	274.18	3.62
PAN-1_48	505.38	0.82	24.12	0.01	0.05	0.01	261.90	3.26	310.51	19.93	261.90	3.26
PAN-1_47	109.82	1.17	36.72	0.02	0.05	0.02	173.20	3.12	241.40	52.70	173.20	3.12
PAN-1_46	313.20	0.86	9.40	0.01	0.06	0.01	651.41	8.94	643.60	12.64	651.41	8.94
PAN-1_45	285.62	0.41	43.28	0.02	0.05	0.01	147.26	2.23	272.10	28.43	147.26	2.23
PAN-1_44	20.66	1.21	10.93	0.02	0.06	0.02	564.59	11.42	619.83	53.02	564.59	11.42
PAN-1_43	228.82	0.36	11.61	0.01	0.06	0.01	532.66	7.63	538.54	18.83	532.66	7.63
PAN-1_42	179.99	0.53	3.81	0.01	0.10	0.00	1504.00	19.47	1598.82	9.11	1598.82	9.11
PAN-1_41	920.36	0.13	7.77	0.01	0.07	0.00	780.34	10.86	1042.70	8.30	1042.70	8.30
PAN-1_40	200.41	0.48	4.90	0.01	0.08	0.01	1197.21	15.67	1210.77	10.65	1210.77	10.65
PAN-1_39	250.58	0.32	3.63	0.02	0.09	0.00	1570.20	20.94	1500.28	9.05	1500.28	9.05
PAN-1_38	63.02	0.57	50.52	0.02	0.05	0.03	126.37	2.70	235.02	66.55	126.37	2.70
PAN-1_37	200.82	0.24	16.28	0.02	0.06	0.01	384.35	7.34	422.23	23.33	384.35	7.34
PAN-1_36	204.09	0.46	5.77	0.01	0.07	0.01	1030.40	13.81	1025.66	12.00	1025.66	12.00
PAN-1_35	64.04	0.63	9.63	0.02	0.06	0.01	637.13	10.01	651.62	29.57	637.13	10.01
PAN-1_34	192.02	0.49	42.07	0.02	0.05	0.02	151.44	2.47	203.34	39.04	151.44	2.47
PAN-1_33	340.45	0.50	40.98	0.02	0.05	0.01	155.41	2.42	202.19	26.88	155.41	2.42
PAN-1_32	59.01	1.12	5.82	0.02	0.07	0.01	1021.73	16.98	1040.83	21.12	1040.83	21.12
PAN-1_31	99.56	0.54	5.20	0.02	0.08	0.01	1133.48	15.69	1192.27	14.04	1192.27	14.04
PAN-1_30	172.23	0.86	21.50	0.02	0.05	0.01	293.04	4.42	314.15	27.77	293.04	4.42
PAN-1_29	216.13	0.59	6.66	0.01	0.07	0.01	902.10	12.54	924.02	12.77	924.02	12.77
PAN-1_28	434.26	0.53	26.14	0.01	0.05	0.01	241.99	3.54	370.94	26.27	241.99	3.54
PAN-1_27	136.07	0.48	37.96	0.02	0.05	0.02	167.62	2.99	174.22	44.82	167.62	2.99
PAN-1_26	339.61	0.53	10.95	0.02	0.06	0.01	563.59	8.63	548.66	19.09	563.59	8.63
PAN-1_25	127.10	0.53	11.01	0.02	0.06	0.01	560.41	8.43	586.67	23.36	560.41	8.43
PAN-1_24	29.34	1.36	9.89	0.02	0.06	0.02	620.79	10.73	641.21	40.72	620.79	10.73
PAN-1_23	129.82	0.64	13.58	0.02	0.06	0.01	458.11	7.27	478.35	26.89	458.11	7.27
PAN-1_22	480.24	0.90	22.08	0.02	0.05	0.01	285.50	4.55	344.13	21.57	285.50	4.55
PAN-1_21	64.09	0.38	5.58	0.02	0.08	0.01	1063.53	15.89	1132.69	19.93	1132.69	19.93
PAN-1_20	379.13	0.55	36.43	0.02	0.05	0.01	174.59	2.66	171.29	28.36	174.59	2.66
PAN-1_19	317.89	0.09	21.40	0.02	0.06	0.02	294.47	6.43	532.12	33.15	294.47	6.43
PAN-1_18	169.62	0.79	21.79	0.02	0.06	0.01	289.28	5.29	424.79	27.09	289.28	5.29
PAN-1_17	389.70	0.37	40.62	0.02	0.05	0.01	156.79	2.47	199.19	27.87	156.79	2.47
PAN-1_16	82.22	0.30	5.15	0.02	0.08	0.01	1144.36	16.49	1174.72	17.48	1174.72	17.48
PAN-1_15	763.91	0.05	12.01	0.02	0.06	0.01	515.39	8.56	656.75	22.63	515.39	8.56
PAN-1_14	395.68	0.36	4.99	0.02	0.08	0.01	1176.48	16.14	1186.36	12.08	1186.36	12.08
PAN-1_13	268.04	0.80	1.91	0.02	0.19	0.01	2716.77	33.48	2713.04	8.89	2713.04	8.89
PAN-1_12	138.89	1.34	9.96	0.02	0.06	0.01	616.48	9.89	745.20	24.92	616.48	9.89
PAN-1_11	21.42	0.56	5.79	0.02	0.07	0.02	1026.31	18.39	1055.87	31.18	1055.87	31.18
PAN-1_10	44.31	0.63	4.70	0.02	0.08	0.01	1244.05	19.02	1265.05	20.18	1265.05	20.18
PAN-1_9	128.06	0.80	5.30	0.02	0.08	0.01	1115.00	16.04	1131.10	16.34	1131.10	16.34
PAN-1_8	135.22	1.18	3.16	0.02	0.11	0.01	1772.91	24.02	1824.52	10.78	1824.52	10.78
PAN-1_7	259.97	0.40	25.26	0.02	0.05	0.01	250.30	4.14	192.43	26.05	250.30	4.14
PAN-1_6	116.20	0.50	42.47	0.02	0.05	0.02	150.04	2.75	170.19	46.62	150.04	2.75
PAN-1_5	227.33	0.27	25.62	0.02	0.05	0.01	246.86	3.93	367.90	26.11	246.86	3.93
PAN-1_4	401.17	0.09	27.67	0.02	0.05	0.02	228.86	4.19	330.15	36.48	228.86	4.19
PAN-1_3	97.55	0.56	10.29	0.02	0.06	0.01	597.93	9.34	602.30	27.04	597.93	9.34
PAN-1_2	325.95	0.36	7.36	0.02	0.07	0.01	821.46	14.58	996.69	14.64	996.69	14.64
PAN-1_1	347.18	0.50	2.87	0.02	0.12	0.01	1926.74	25.86	1976.35	10.06	1976.35	10.06
JPC08_88	276.63	1.10	24.16	0.01	0.05	0.01	261.42	3.84	276.80	24.96	261.42	3.84
JPC08_87	205.68	0.66	20.79	0.02	0.05	0.01	302.86	4.93	255.05	26.48	302.86	4.93
JPC08_86	273.32	0.47	5.58	0.01	0.07	0.01	1062.90	13.39	1017.80	16.59	1017.80	16.59
JPC08_85	776.04	0.57	23.94	0.01	0.05	0.01	263.85	3.55	266.85	19.54	263.85	3.55
JPC08_84	47.62	0.56	4.55	0.02	0.09	0.01	1281.21	18.61	1343.88	19.94	1343.88	19.94
JPC08_83	325.96	1.07	9.61	0.01	0.06	0.01	637.86	8.55	624.30	18.62	637.86	8.55
JPC08_82	429.32	0.43	41.04	0.06	0.05	0.01	155.21	9.52	337.78	23.23	155.21	9.52
JPC08_81	490.94	0.71	16.62	0.02	0.06	0.01	376.74	8.09	420.78	19.69	376.74	8.09
JPC08_80	675.44	0.60	4.37	0.01	0.08	0.01	1328.78	15.98	1312.83	14.59	1312.83	14.59
JPC08_79	277.40	0.97	7.46	0.02	0.07	0.01	811.27	11.81	884.54	17.22	811.27	11.81

JPC08_78	251.99	1.12	22.62	0.01	0.06	0.01	278.85	4.08	471.65	24.58	278.85	4.08
JPC08_77	211.41	0.99	24.33	0.02	0.05	0.01	259.67	3.83	248.85	29.91	259.67	3.83
JPC08_76	245.30	0.89	5.88	0.03	0.11	0.04	1012.66	25.30	1872.71	63.29	1872.71	63.29
JPC08_75	651.30	0.31	13.10	0.03	0.06	0.01	474.35	12.60	587.01	17.79	474.35	12.60
JPC08_74	380.01	0.49	6.96	0.02	0.07	0.01	865.85	13.30	859.66	16.94	859.66	13.30
JPC08_73	44.91	0.44	2.06	0.02	0.19	0.01	2548.46	40.03	2705.42	13.31	2705.42	13.31
JPC08_72	221.58	0.50	22.44	0.02	0.05	0.01	281.06	4.52	305.47	27.61	281.06	4.52
JPC08_71	39.57	0.21	10.95	0.02	0.06	0.02	563.47	9.88	600.21	33.55	563.47	9.88
JPC08_70	41.28	0.21	11.00	0.02	0.06	0.02	560.68	9.59	586.44	32.65	560.68	9.59
JPC08_69	39.96	0.20	10.94	0.02	0.06	0.02	564.03	9.39	546.38	33.76	564.03	9.39
JPC08_68	276.18	0.64	19.33	0.02	0.06	0.02	325.14	5.06	594.15	32.58	325.14	5.06
JPC08_67	867.78	0.13	26.24	0.01	0.05	0.01	241.08	3.35	268.22	21.60	241.08	3.35
JPC08_66	540.33	0.77	25.06	0.02	0.05	0.01	252.23	4.35	280.34	23.65	252.23	4.35
JPC08_65	1624.38	0.09	9.49	0.01	0.06	0.01	645.59	7.82	588.49	16.31	645.59	7.82
JPC08_64	423.16	0.49	27.03	0.02	0.06	0.02	234.17	4.65	770.18	41.60	234.17	4.65
JPC08_63	205.23	0.76	24.02	0.02	0.08	0.02	262.90	5.35	1096.86	30.64	262.90	5.35
JPC08_62	323.58	0.61	21.46	0.02	0.06	0.01	293.63	5.81	498.65	27.05	293.63	5.81
JPC08_61	644.93	0.68	79.19	0.02	0.05	0.01	80.90	1.69	147.82	32.41	80.90	1.69
JPC08_60	672.01	0.31	27.35	0.02	0.06	0.01	231.45	4.60	433.25	27.96	231.45	4.60
JPC08_59	410.47	0.56	5.84	0.02	0.07	0.01	1019.56	18.39	1034.16	21.30	1034.16	21.30
JPC08_58	271.96	0.80	24.92	0.05	0.05	0.02	253.64	11.34	390.73	51.88	253.64	11.34
JPC08_57	1376.77	0.44	12.71	0.02	0.06	0.01	488.28	9.50	656.92	22.34	488.28	9.50
JPC08_56	190.42	0.67	21.16	0.02	0.05	0.01	297.69	6.17	344.92	31.87	297.69	6.17
JPC08_55	210.67	0.57	2.98	0.02	0.11	0.01	1864.47	31.77	1875.44	18.81	1875.44	18.81
JPC08_54	365.88	1.04	24.06	0.02	0.05	0.01	262.53	5.59	306.66	27.77	262.53	5.59
JPC08_53	202.91	0.70	4.74	0.02	0.08	0.01	1234.30	22.39	1252.37	21.18	1252.37	21.18
JPC08_52	875.61	0.70	23.13	0.02	0.06	0.01	272.82	5.42	497.62	25.35	272.82	5.42
JPC08_51	128.97	0.89	19.51	0.02	0.06	0.01	322.26	6.58	469.44	29.87	322.26	6.58
JPC08_50	133.24	0.37	5.30	0.02	0.08	0.01	1114.53	21.63	1087.93	22.54	1087.93	22.54
JPC08_49	166.10	0.87	24.66	0.02	0.05	0.01	256.22	5.28	289.79	33.38	256.22	5.28
JPC08_48	341.87	0.81	23.55	0.02	0.06	0.02	268.06	5.30	572.59	36.73	268.06	5.30
JPC08_47	205.23	1.25	24.63	0.02	0.05	0.01	256.59	5.60	302.84	31.45	256.59	5.60
JPC08_46	593.80	0.75	25.47	0.02	0.05	0.01	248.28	4.82	356.45	27.08	248.28	4.82
JPC08_45	287.56	0.82	4.81	0.02	0.08	0.01	1216.82	23.58	1243.56	20.71	1243.56	20.71
JPC08_44	485.17	0.25	19.67	0.03	0.06	0.01	319.59	8.80	495.09	24.89	319.59	8.80
JPC08_43	223.85	0.47	6.74	0.02	0.07	0.01	891.77	16.77	1010.05	22.40	1010.05	22.40
JPC08_42	296.28	0.40	7.59	0.02	0.07	0.01	797.43	18.67	986.55	22.61	986.55	18.67
JPC08_41	127.27	1.16	24.73	0.02	0.05	0.02	255.52	5.33	268.16	36.41	255.52	5.33
JPC08_40	395.89	0.29	56.38	0.17	0.06	0.01	113.34	18.51	730.86	30.09	113.34	18.51
JPC08_39	1526.72	0.27	11.20	0.03	0.06	0.01	551.28	13.38	661.70	30.89	551.28	13.38
JPC08_38	713.87	0.55	13.73	0.02	0.06	0.01	453.21	8.60	498.36	23.65	453.21	8.60
JPC08_37	373.18	0.29	9.36	0.02	0.06	0.01	654.38	12.47	671.38	23.29	654.38	12.47
JPC08_36	576.16	0.34	6.40	0.03	0.08	0.01	936.00	24.81	1155.90	21.07	1155.90	21.07
JPC08_35	169.95	0.86	23.31	0.02	0.06	0.02	270.75	6.18	594.92	33.02	270.75	6.18
JPC08_34	740.70	0.88	26.67	0.02	0.05	0.01	237.31	4.66	303.38	26.30	237.31	4.66
JPC08_33	308.19	0.01	10.74	0.02	0.06	0.01	573.75	11.35	582.60	24.40	573.75	11.35
JPC08_32	286.88	0.63	12.20	0.02	0.06	0.01	507.89	10.74	609.04	24.73	507.89	10.74
JPC08_31	90.64	1.20	3.06	0.02	0.11	0.01	1822.25	33.18	1817.20	19.54	1817.20	19.54
JPC08_30	96.49	0.51	5.57	0.02	0.08	0.01	1064.76	21.83	1115.71	22.99	1115.71	22.99
JPC08_29	84.73	0.62	16.04	0.02	0.06	0.02	389.97	8.23	430.53	34.54	389.97	8.23
JPC08_28	1128.33	0.51	26.23	0.02	0.05	0.01	241.23	5.06	289.39	25.43	241.23	5.06
JPC08_27	116.71	1.02	3.35	0.02	0.11	0.01	1683.93	30.26	1772.74	19.37	1772.74	19.37
JPC08_26	430.31	0.74	71.87	0.02	0.05	0.02	89.08	2.00	134.61	36.66	89.08	2.00
JPC08_25	619.26	0.65	24.34	0.02	0.05	0.01	259.55	5.13	265.39	26.56	259.55	5.13
JPC08_24	171.73	0.80	22.20	0.02	0.05	0.01	284.06	6.17	309.83	31.27	284.06	6.17
JPC08_23	1048.82	0.22	8.44	0.02	0.07	0.01	722.06	14.69	1012.96	21.19	1012.96	14.69
JPC08_22	1481.06	0.58	23.63	0.03	0.06	0.01	267.16	7.87	436.15	25.05	267.16	7.87
JPC08_21	901.94	0.55	24.24	0.02	0.05	0.01	260.58	5.97	327.52	25.01	260.58	5.97
JPC08_20	612.12	1.98	3.21	0.02	0.12	0.01	1746.69	32.04	1917.35	19.43	1917.35	19.43
JPC08_19	587.66	1.04	12.50	0.02	0.06	0.01	495.93	9.93	525.92	23.83	495.93	9.93
JPC08_18	321.91	0.73	20.25	0.02	0.05	0.01	310.72	6.11	330.80	28.52	310.72	6.11
JPC08_17	146.14	0.93	3.04	0.02	0.12	0.01	1831.90	32.40	1897.60	18.98	1897.60	18.98
JPC08_16	84.75	1.17	16.82	0.09	0.08	0.07	372.27	32.46	1179.47	140.03	372.27	32.46
JPC08_15	53.29	0.95	2.10	0.06	0.17	0.02	2511.44	125.54	2512.27	32.12	2512.27	32.12
JPC08_14	344.36	0.90	26.87	0.04	0.06	0.03	235.53	8.52	418.02	61.94	235.53	8.52
JPC08_13	438.26	1.18	25.53	0.04	0.05	0.02	247.67	9.01	232.64	48.50	247.67	9.01
JPC08_12	208.12	0.66	22.04	0.04	0.05	0.03	286.04	11.26	162.82	60.00	286.04	11.26
JPC08_11	350.15	1.06	24.11	0.04	0.05	0.02	262.00	9.21	123.07	42.03	262.00	9.21
JPC08_10	809.65	0.16	7.16	0.03	0.07	0.01	842.58	24.47	1041.82	24.90	1041.82	24.90
JPC08_9	31.09	0.10	11.05	0.05	0.06	0.04	558.44	24.26	536.63	76.22	558.44	24.26
JPC08_8	585.20	0.33	27.48	0.03	0.05	0.01	230.46	6.79	309.65	31.30	230.46	6.79

JPC08_7	488.37	0.56	22.10	0.03	0.05	0.01	285.28	8.24	311.86	26.50	285.28	8.24
JPC08_6	748.02	0.51	5.65	0.03	0.07	0.01	1050.12	27.68	1031.94	19.17	1031.94	19.17
JPC08_5	194.72	1.41	23.18	0.03	0.05	0.01	272.24	7.93	309.06	29.18	272.24	7.93
JPC08_4	380.08	0.71	2.96	0.03	0.11	0.01	1877.80	46.41	1826.86	17.04	1826.86	17.04
JPC08_3	478.57	0.18	7.07	0.03	0.07	0.01	853.24	23.82	872.85	20.75	872.85	23.82
JPC08_2	577.80	0.74	23.47	0.03	0.05	0.01	268.97	7.52	399.74	23.83	268.97	7.52
JPC08_1	356.50	0.97	24.07	0.03	0.05	0.01	262.40	7.49	295.05	26.11	262.40	7.49
SZ0023-110	147.74	5.12	711.51	33.76	0.07	2.21	711.51	33.76	830.94	46.11	711.51	33.76
SZ0023-109	387.06	6.46	544.32	4.63	0.06	0.78	544.32	4.63	538.64	16.99	544.32	4.63
SZ0023-108	284.47	4.75	521.49	30.03	0.06	2.06	521.49	30.03	639.10	44.41	521.49	30.03
SZ0023-107	95.11	2.29	526.31	9.48	0.06	2.71	526.31	9.48	593.80	58.77	526.31	9.48
SZ0023-106	221.97	1.65	208.06	19.05	0.05	5.63	208.06	19.05	359.49	127.03	208.06	19.05
SZ0023-105	369.97	3.26	501.63	7.32	0.06	1.06	501.63	7.32	486.76	23.39	501.63	7.32
SZ0023-104	93.44	1.85	####	51.78	0.08	0.91	1222.78	51.78	1198.68	18.01	1198.68	18.01
SZ0023-103	135.26	1.63	919.95	9.86	0.07	1.23	919.95	9.86	904.59	25.44	904.59	25.44
SZ0023-102	65.11	0.86	630.17	10.91	0.06	3.59	630.17	10.91	632.90	77.31	630.17	10.91
SZ0023-101	94.47	0.69	579.10	7.99	0.06	2.41	579.10	7.99	504.50	53.16	579.10	7.99
SZ0023-100	1489.56	13.32	397.51	4.26	0.06	0.84	397.51	4.26	508.71	18.52	397.51	4.26
SZ0023-99	151.44	1.94	####	9.91	0.09	0.50	1330.95	9.91	1335.45	9.62	1335.45	9.62
SZ0023-98	164.02	2.55	574.46	5.87	0.06	1.75	574.46	5.87	577.74	38.08	574.46	5.87
SZ0023-97	378.62	1.79	528.98	4.44	0.06	1.58	528.98	4.44	519.06	34.77	528.98	4.44
SZ0023-96	99.17	0.84	####	30.02	0.08	1.00	1268.40	30.02	1266.33	19.55	1266.33	19.55
SZ0023-95	290.99	1.82	####	18.45	0.07	0.37	1028.63	18.45	1035.02	7.53	1035.02	7.53
SZ0023-94	63.88	1.54	1166.91	20.65	0.08	1.89	1166.91	20.65	1149.99	37.57	1149.99	37.57
SZ0023-93	506.52	1.91	310.56	2.90	0.05	1.23	310.56	2.90	319.54	27.87	310.56	2.90
SZ0023-92	195.10	0.99	####	43.07	0.12	0.23	1888.52	43.07	2015.92	4.14	2015.92	4.14
SZ0023-91	51.25	0.98	654.73	10.18	0.06	5.06	654.73	10.18	686.31	107.95	654.73	10.18
SZ0023-90	395.81	1.53	859.22	9.53	0.07	0.57	859.22	9.53	919.25	11.73	859.22	9.53
SZ0023-89	86.01	1.22	1059.51	15.71	0.08	1.69	1059.51	15.71	1070.64	33.99	1070.64	33.99
SZ0023-87	129.02	1.82	####	43.67	0.13	0.37	1973.46	43.67	2091.99	6.45	2091.99	6.45
SZ0023-86	185.41	1.40	541.38	8.55	0.06	1.48	541.38	8.55	533.60	32.38	541.38	8.55
SZ0023-85	7.78	1.90	1010.13	52.93	0.07	16.58	1010.13	52.93	967.78	340.55	967.78	340.55
SZ0023-84	123.70	0.96	260.55	5.09	0.05	6.66	260.55	5.09	311.80	151.82	260.55	5.09
SZ0023-83	287.10	1.32	1561.42	62.24	0.10	6.32	1561.42	62.24	1583.74	118.22	1583.74	118.22
SZ0023-82	116.80	1.78	####	18.77	0.09	0.57	1295.95	18.77	1320.38	11.12	1320.38	11.12
SZ0023-81	100.32	1.47	305.62	6.77	0.05	3.42	305.62	6.77	232.66	78.89	305.62	6.77
SZ0023-80	530.62	3.60	####	11.20	0.09	0.25	1356.67	11.20	1349.83	4.87	1349.83	4.87
SZ0023-79	169.71	1.64	520.23	3.63	0.06	2.58	520.23	3.63	534.86	56.53	520.23	3.63
SZ0023-78	163.76	0.83	274.90	5.16	0.05	7.47	274.90	5.16	170.14	174.65	274.90	5.16
SZ0023-77	57.51	1.57	####	15.27	0.08	1.68	1221.09	15.27	1230.29	32.98	1230.29	32.98
SZ0023-76	163.29	1.18	####	17.82	0.11	0.29	1744.59	17.82	1764.42	5.29	1764.42	5.29
SZ0023-75	501.19	18.21	948.58	10.57	0.07	0.17	948.58	10.57	1049.34	3.33	1049.34	3.33
SZ0023-74	26.88	0.87	822.21	82.22	0.07	9.74	822.21	82.22	814.88	204.11	822.21	82.22
SZ0023-73	154.77	1.53	####	10.34	0.08	0.93	1108.84	10.34	1103.58	18.60	1103.58	18.60
SZ0023-71	114.43	0.50	273.03	8.38	0.05	8.08	273.03	8.38	198.90	188.02	273.03	8.38
SZ0023-70	63.95	1.27	####	12.86	0.08	2.06	1026.21	12.86	1083.81	41.34	1083.81	41.34
SZ0023-69	70.46	1.02	####	56.01	0.11	2.03	1819.40	56.01	1739.81	37.17	1739.81	37.17
SZ0023-68	118.28	2.10	1014.01	20.33	0.07	1.00	1014.01	20.33	1031.89	20.26	1031.89	20.26
SZ0023-67	141.72	0.99	1215.91	22.70	0.08	0.97	1215.91	22.70	1285.11	18.93	1285.11	18.93
SZ0023-66	173.64	1.21	519.34	4.71	0.06	1.79	519.34	4.71	530.85	39.25	519.34	4.71
SZ0023-64	105.93	1.18	####	24.51	0.11	0.60	1890.60	24.51	1868.46	10.91	1868.46	10.91
SZ0023-63	162.89	1.17	1575.50	33.96	0.10	0.38	1575.50	33.96	1587.17	7.20	1587.17	7.20
SZ0023-62	32.89	1.58	####	73.79	0.25	0.55	2961.69	73.79	3161.04	8.80	3161.04	8.80
SZ0023-61	145.20	1.32	306.99	12.40	0.07	21.17	306.99	12.40	877.14	442.79	306.99	12.40
SZ0023-60	230.34	3.58	721.11	21.96	0.06	1.13	721.11	21.96	747.41	23.93	721.11	21.96
SZ0023-59	383.78	0.84	264.77	2.96	0.05	1.60	264.77	2.96	269.58	36.61	264.77	2.96
SZ0023-58	158.51	2.45	908.26	8.34	0.07	1.51	908.26	8.34	902.59	31.17	902.59	31.17
SZ0023-57	45.82	1.12	571.40	24.17	0.06	6.95	571.40	24.17	530.69	152.46	571.40	24.17
SZ0023-56	193.49	1.41	480.77	16.70	0.06	1.94	480.77	16.70	470.47	42.96	480.77	16.70
SZ0023-55	222.42	2.46	583.72	9.93	0.06	1.15	583.72	9.93	573.88	24.97	583.72	9.93
SZ0023-54	40.84	0.88	588.51	19.39	0.06	6.64	588.51	19.39	511.22	146.17	588.51	19.39
SZ0023-53	266.37	2.79	642.22	3.32	0.06	1.07	642.22	3.32	642.94	23.04	642.22	3.32
SZ0023-52	247.11	2.99	896.29	86.50	0.08	2.52	896.29	86.50	1119.96	50.36	1119.96	50.36
SZ0023-51	27.17	0.90	273.09	13.73	0.04	23.95	273.09	13.73	-169.25	603.78	273.09	13.73
SZ0023-50	187.55	3.86	####	40.52	0.24	0.17	2826.03	40.52	3122.27	2.72	3122.27	2.72
SZ0023-49b	134.21	0.93	340.07	4.87	0.05	4.54	340.07	4.87	326.35	103.02	340.07	4.87
SZ0023-49	299.87	1.26	417.91	1.63	0.05	1.23	417.91	1.63	373.00	27.60	417.91	1.63
SZ0023-48	209.49	1.72	382.99	8.49	0.05	1.47	382.99	8.49	387.53	33.07	382.99	8.49
SZ0023-47	27.49	0.78	1716.73	24.86	0.10	1.76	1716.73	24.86	1713.55	32.44	1713.55	32.44
SZ0023-46	139.56	0.78	477.80	9.75	0.06	3.34	477.80	9.75	470.78	74.06	477.80	9.75

SZ0023-45	41.55	1.42	302.43	7.95	0.05	18.20	302.43	7.95	262.09	420.92	302.43	7.95
SZ0023-44	1050.05	3.90	812.70	46.76	0.07	0.81	812.70	46.76	925.69	16.74	812.70	46.76
SZ0023-43	335.54	1.35	1175.81	7.23	0.08	0.37	1175.81	7.23	1165.05	7.42	1165.05	7.42
SZ0023-42	181.83	1.07	277.42	3.34	0.05	3.02	277.42	3.34	296.61	68.90	277.42	3.34
SZ0023-40	94.02	0.80	296.71	3.09	0.05	8.34	296.71	3.09	297.61	190.63	296.71	3.09
SZ0023-39	108.74	1.01	253.78	2.96	0.05	3.94	253.78	2.96	338.69	89.23	253.78	2.96
SZ0023-38	57.78	1.38	561.67	7.88	0.06	7.64	561.67	7.88	565.56	166.65	561.67	7.88
SZ0023-37	38.99	1.01	1701.82	65.26	0.11	1.01	1701.82	65.26	1763.68	18.48	1763.68	18.48
SZ0023-36	120.75	1.08	258.50	5.36	0.05	5.10	258.50	5.36	244.94	117.51	258.50	5.36
SZ0023-35	268.50	1.25	####	14.87	0.08	0.43	1283.55	14.87	1269.96	8.38	1269.96	8.38
SZ0023-34	186.69	2.59	104.29	2.03	0.05	9.51	104.29	2.03	236.70	219.81	104.29	2.03
SZ0023-33	62.96	1.36	554.52	5.12	0.06	3.41	554.52	5.12	497.12	75.18	554.52	5.12
SZ0023-30	358.43	5.06	####	8.59	0.08	0.42	1052.46	8.59	1073.92	8.45	1073.92	8.45
SZ0023-29	201.30	8.75	512.37	4.52	0.06	2.16	512.37	4.52	515.49	47.52	512.37	4.52
SZ0023-28	430.02	1.80	917.39	27.64	0.08	0.43	917.39	27.64	1124.74	8.59	1124.74	8.59
SZ0023-27	97.37	1.84	599.95	15.76	0.06	5.02	599.95	15.76	752.31	106.02	599.95	15.76
SZ0023-26	89.66	0.89	487.34	5.26	0.06	4.38	487.34	5.26	421.04	97.78	487.34	5.26
SZ0023-25	33.57	1.51	####	10.21	0.08	4.35	1133.92	10.21	1205.05	85.66	1205.05	85.66
SZ0023-24	119.30	5.43	1108.61	41.16	0.08	1.26	1108.61	41.16	1185.54	24.98	1185.54	24.98
SZ0023-23	171.95	1.00	477.48	3.05	0.06	1.66	477.48	3.05	517.97	36.37	477.48	3.05
SZ0023-22	67.31	2.39	####	18.59	0.08	1.63	1057.08	18.59	1126.22	32.43	1126.22	32.43
SZ0023-21	143.13	2.59	1503.55	14.34	0.09	0.47	1503.55	14.34	1519.46	8.82	1519.46	8.82
SZ0023-19	52.71	1.48	600.93	10.82	0.06	7.10	600.93	10.82	593.98	154.13	600.93	10.82
SZ0023-18	44.99	2.45	####	8.75	0.07	1.83	1044.25	8.75	1005.69	37.10	1005.69	37.10
SZ0023-17	101.17	2.49	####	22.25	0.11	0.65	1702.65	22.25	1774.68	11.87	1774.68	11.87
SZ0023-16	84.54	1.51	923.09	14.95	0.07	2.06	923.09	14.95	918.95	42.39	918.95	42.39
SZ0023-15	420.38	3.94	721.80	33.28	0.06	0.89	721.80	33.28	764.46	18.86	721.80	33.28
SZ0023-14	316.53	2.68	495.92	7.60	0.06	0.61	495.92	7.60	509.86	13.41	495.92	7.60
SZ0023-13	114.97	1.09	271.79	7.25	0.06	12.72	271.79	7.25	560.36	278.27	271.79	7.25
SZ0023-12	230.65	4.69	234.08	32.02	0.06	4.03	234.08	32.02	412.91	90.18	234.08	32.02
SZ0023-11	280.26	2.04	722.66	9.54	0.06	0.93	722.66	9.54	724.41	19.71	722.66	9.54
SZ0023-10	61.56	0.86	####	22.28	0.09	1.09	1448.02	22.28	1447.80	20.82	1447.80	20.82
SZ0023-9	326.98	1.68	104.24	1.38	0.05	5.06	104.24	1.38	135.24	118.89	104.24	1.38
SZ0023-8	43.76	1.38	982.48	18.16	0.07	5.33	982.48	18.16	1006.90	108.19	1006.90	108.19
SZ0023-7	203.85	3.24	627.78	13.55	0.07	16.00	627.78	13.55	903.87	331.77	627.78	13.55
SZ0023-6	351.97	7.26	####	150.60	0.26	1.45	3021.97	150.60	3250.44	22.91	3250.44	22.91
SZ0023-5	248.99	1.91	537.79	5.50	0.06	1.05	537.79	5.50	583.38	22.80	537.79	5.50
SZ0023-4	232.87	1.83	1157.02	13.16	0.08	0.38	1157.02	13.16	1152.51	7.43	1152.51	7.43
SZ0023-3	132.05	0.70	279.52	6.43	0.05	2.95	279.52	6.43	362.89	66.52	279.52	6.43
SZ0023-2	201.48	0.82	270.83	2.34	0.05	4.93	270.83	2.34	252.82	113.44	270.83	2.34
SZ0023-1	115.51	1.79	792.30	14.11	0.07	1.33	792.30	14.11	784.70	28.02	792.30	14.11
MQA4A-1	211.52	0.25	7.34	8.18	0.07	2.37	823.42	63.23	973.18	48.32	823.42	63.23
MQA4A-2	1178.97	0.01	5.67	8.11	0.08	0.41	1047.64	78.47	1197.84	8.14	1197.84	8.14
MQA4A-4	633.50	0.27	6.52	3.23	0.07	0.26	920.48	27.67	1047.32	5.33	1047.32	5.33
MQA4A-5	363.42	0.34	11.38	4.30	0.06	1.05	543.03	22.39	573.35	22.74	543.03	22.39
MQA4A-6	229.91	0.60	26.79	2.99	0.05	2.47	236.27	6.95	232.58	56.98	236.27	6.95
MQA4A-7	134.96	2.01	11.48	2.50	0.06	2.13	538.26	12.90	618.66	46.03	538.26	12.90
MQA4A-8	372.41	0.50	2.84	6.74	0.13	0.75	1944.08	113.07	2159.85	13.01	2159.85	13.01
MQA4A-9	629.43	0.21	11.55	1.82	0.06	0.57	535.26	9.34	578.85	12.47	535.26	9.34
MQA4A-10	140.40	0.31	8.03	4.08	0.07	1.27	756.45	29.15	829.29	26.54	756.45	29.15
MQA4A-11	201.27	0.25	25.02	4.65	0.05	3.36	252.66	11.53	252.68	77.28	252.66	11.53
MQA4A-12	328.70	0.19	7.78	5.85	0.07	2.87	779.56	42.92	851.05	59.74	779.56	42.92
MQA4A-13	295.43	0.17	13.09	2.39	0.06	1.26	474.39	10.95	501.18	27.68	474.39	10.95
MQA4A-14	348.27	0.11	17.95	3.72	0.06	2.07	349.45	12.67	455.35	45.86	349.45	12.67
MQA4A-15	285.27	0.66	3.66	2.40	0.10	0.33	1558.34	33.22	1709.95	6.15	1709.95	6.15
MQA4A-16	283.30	0.30	23.98	5.22	0.05	1.55	263.41	13.47	239.89	35.66	263.41	13.47
MQA4A-17	328.43	0.23	23.96	3.16	0.05	2.42	263.63	8.17	302.77	55.11	263.63	8.17
MQA4A-18	667.30	0.24	26.43	1.40	0.05	1.55	239.42	3.29	240.78	35.82	239.42	3.29
MQA4A-19	192.44	1.27	12.13	4.31	0.06	1.66	510.58	21.17	517.07	36.40	510.58	21.17
MQA4A-20	319.79	0.46	26.75	2.22	0.05	4.19	236.62	5.15	245.65	96.64	236.62	5.15
MQA4A-21	169.75	0.32	4.08	2.17	0.09	0.56	1411.64	27.53	1404.42	10.82	1404.42	10.82
MQA4A-22	107.82	1.05	3.33	4.37	0.11	0.79	1690.98	64.94	1778.98	14.33	1778.98	14.33
MQA4A-23	217.29	0.84	13.37	2.00	0.06	1.84	464.88	8.98	495.41	40.56	464.88	8.98
MQA4A-24	305.69	0.10	25.22	2.95	0.05	3.04	250.69	7.26	238.92	70.22	250.69	7.26
MQA4A-25	624.06	0.15	26.51	1.22	0.05	0.87	238.74	2.85	218.48	20.07	238.74	2.85
MQA4A-26	469.08	0.53	11.41	2.76	0.06	1.14	541.76	14.32	590.05	24.68	541.76	14.32
MQA4A-27	175.23	0.38	2.45	5.28	0.18	1.57	2206.57	98.69	2625.97	26.06	2625.97	26.06
MQA4A-28	1076.69	0.48	9.81	4.23	0.06	0.52	625.66	25.21	665.64	11.13	625.66	25.21
MQA4A-29	846.59	0.35	8.62	1.17	0.06	0.36	707.29	7.83	761.99	7.52	707.29	7.83
MQA4A-30	205.74	0.53	10.90	1.72	0.06	0.76	566.06	9.33	628.82	16.39	566.06	9.33

MQA4A-31	453.57	0.06	5.93	2.70	0.07	0.39	1004.19	25.10	1041.11	7.86	1041.11	7.86
MQA4A-32	494.73	0.21	5.54	14.04	0.08	1.54	1068.97	138.35	1293.35	29.91	1293.35	29.91
MQA4A-33	224.82	0.75	11.45	1.94	0.06	1.46	539.59	10.05	546.36	31.99	539.59	10.05
MQA4A-34	176.85	0.88	9.69	1.95	0.06	1.41	633.34	11.76	612.10	30.55	633.34	11.76
MQA4A-35	282.76	0.94	16.03	2.61	0.06	1.51	390.01	9.88	463.59	33.54	390.01	9.88
MQA4A-36	1105.95	0.37	21.25	2.66	0.06	1.03	296.50	7.72	454.11	22.78	296.50	7.72
MQA4A-38	53.92	0.37	25.30	3.90	0.05	14.58	249.94	9.57	104.24	346.14	249.94	9.57
MQA4A-39	610.69	0.19	6.24	8.14	0.08	4.26	957.93	72.43	1280.41	83.14	1280.41	83.14
MQA4A-40	117.02	1.13	10.50	1.98	0.06	1.32	586.55	11.10	644.56	28.44	586.55	11.10
MQA4A-41	289.15	0.18	6.69	4.18	0.07	0.46	897.77	35.04	853.73	9.61	897.77	35.04
MQA4A-42	329.36	0.13	25.60	2.54	0.05	3.13	246.99	6.17	191.75	72.71	246.99	6.17
MQA4A-44	216.06	0.48	4.59	2.08	0.08	1.23	1269.78	23.98	1197.79	24.15	1197.79	24.15
MQA4A-45	497.69	0.02	24.63	3.25	0.06	5.05	256.52	8.16	611.61	109.28	256.52	8.16
MQA4A-46	37.39	0.68	9.64	2.55	0.06	6.49	636.39	15.47	678.04	138.94	636.39	15.47
MQA4A-47	118.20	0.64	7.22	4.08	0.07	1.08	836.40	32.03	848.67	22.39	836.40	32.03
MQA4A-48	313.57	0.33	11.64	3.70	0.06	0.98	531.31	18.86	512.69	21.45	531.31	18.86
MQA4A-49	301.45	0.79	11.23	2.06	0.06	0.65	550.07	10.87	562.70	14.23	550.07	10.87
MQA4A-50	280.84	0.09	10.64	2.12	0.06	1.18	578.94	11.74	639.60	25.37	578.94	11.74
MQA4A-51	397.94	0.04	23.30	12.93	0.06	9.36	270.89	34.29	620.03	202.35	270.89	34.29
MQA4A-53	395.29	0.16	7.76	7.18	0.07	5.65	781.66	52.84	884.31	116.90	781.66	52.84
MQA4A-54	282.06	0.29	25.80	2.58	0.05	3.68	245.16	6.19	285.07	84.28	245.16	6.19
MQA4A-55	217.32	0.31	9.56	5.60	0.06	0.91	641.06	34.20	630.94	19.53	641.06	34.20
MQA4A-56	325.97	0.29	27.38	1.94	0.05	3.51	231.22	4.42	284.56	80.28	231.22	4.42
MQA4A-57	218.13	0.20	10.34	11.52	0.06	2.11	594.86	65.48	733.31	44.62	594.86	65.48
MQA4A-58	524.63	0.37	4.61	2.51	0.09	0.39	1266.68	28.91	1323.18	7.51	1323.18	7.51
MQA4A-59	640.67	0.28	7.90	3.20	0.07	0.61	768.38	23.18	785.64	12.86	768.38	23.18
MQA4A-60	120.45	0.42	12.46	3.24	0.06	2.51	497.76	15.52	540.39	54.86	497.76	15.52
MQA4A-61	351.85	0.11	17.46	14.14	0.06	2.06	359.11	49.40	663.56	44.07	359.11	49.40
MQA4A-62	99.32	0.25	10.90	2.21	0.06	1.97	565.72	11.99	591.66	42.71	565.72	11.99
MQA4A-63	119.41	0.63	12.81	3.00	0.06	2.48	484.49	14.00	495.81	54.62	484.49	14.00
MQA4A-64	82.78	0.88	12.20	7.77	0.06	5.80	507.99	37.97	511.51	127.66	507.99	37.97
MQA4A-65	247.81	0.22	21.14	3.17	0.05	1.94	297.92	9.23	329.35	44.08	297.92	9.23
MQA4A-66	119.14	0.87	4.28	2.33	0.09	0.58	1354.19	28.41	1515.02	10.88	1515.02	10.88
MQA4A-67	122.80	0.29	6.17	2.75	0.07	1.48	967.98	24.68	930.66	30.45	930.66	30.45
MQA4A-68	150.10	0.55	6.11	5.09	0.07	0.93	977.62	46.15	958.29	19.02	958.29	19.02
MQA4A-69	253.00	0.50	4.83	8.41	0.09	4.95	1213.54	92.99	1450.55	94.20	1450.55	94.20
MQA4A-70	209.89	0.48	6.06	2.39	0.07	1.10	984.50	21.80	1022.83	22.37	1022.83	22.37
MQA4A-72	361.29	0.02	26.60	1.82	0.05	1.55	237.92	4.24	235.38	35.78	237.92	4.24
MQA4A-73	109.81	0.45	5.83	3.89	0.07	1.00	1020.13	36.70	1057.77	20.15	1057.77	20.15
MQA4A-74	349.69	0.22	23.88	2.70	0.05	1.54	264.40	7.00	269.08	35.24	264.40	7.00
MQA4A-75	251.49	0.57	13.49	2.38	0.06	1.16	461.11	10.61	502.90	25.58	461.11	10.61
MQA4A-76	224.63	0.39	6.62	5.49	0.07	1.06	906.54	46.47	859.10	22.00	906.54	46.47
MQA4A-77	454.49	0.05	1.78	15.10	0.24	1.19	2878.93	350.94	3123.00	18.87	3123.00	18.87
MQA4A-77	1044.00	1.24	5.72	2.02	0.07	0.19	1039.33	19.39	1035.90	3.88	1035.90	3.88
MQA4A-78	538.42	0.80	22.51	9.30	0.06	2.10	280.25	25.49	426.06	46.81	280.25	25.49
MQA4A-79	463.22	0.23	11.69	1.96	0.06	1.02	529.30	9.97	590.86	22.06	529.30	9.97
MQA4A-80	282.18	0.07	13.11	4.51	0.06	1.79	473.75	20.58	614.22	38.76	473.75	20.58
MQA4A-81	15.27	0.98	2.76	2.36	0.13	1.64	1991.58	40.45	2124.38	28.80	2124.38	28.80
MQA4A-82	161.13	0.44	11.62	1.92	0.06	2.16	532.07	9.82	547.59	47.15	532.07	9.82
MQA4A-83	166.78	0.48	1.66	7.74	0.28	2.29	3043.06	187.85	3375.76	35.74	3375.76	35.74
MQA4A-84	143.52	0.33	11.45	3.51	0.06	3.25	539.69	18.15	731.26	68.85	539.69	18.15
MQA4A-85	528.80	0.34	18.90	17.21	0.06	0.85	332.30	55.75	518.66	18.74	332.30	55.75
MQA4A-87	120.04	1.23	3.45	4.32	0.11	1.10	1640.17	62.60	1716.59	20.19	1716.59	20.19
MQA4A-88	432.08	0.05	12.65	7.99	0.07	7.19	490.50	37.73	788.01	151.09	490.50	37.73
MQA4A-89	346.71	0.09	9.88	11.78	0.06	2.66	621.52	69.82	638.17	57.31	621.52	69.82
MQA4A-90	119.98	0.59	12.23	2.84	0.06	4.30	506.61	13.84	543.54	94.04	506.61	13.84
MQA4A-91	331.69	0.69	11.56	1.53	0.06	1.02	534.93	7.84	592.25	22.19	534.93	7.84
MQA4A-92	223.47	0.48	4.24	2.62	0.09	0.35	1365.46	32.27	1443.49	6.60	1443.49	6.60
MQA4A-93	249.91	0.46	10.91	4.73	0.06	3.20	565.34	25.59	620.70	69.00	565.34	25.59
MQA4A-94	497.76	0.18	22.02	5.89	0.05	1.63	286.24	16.50	406.29	36.57	286.24	16.50
MQA4A-95	299.25	0.65	12.47	1.52	0.06	0.90	497.33	7.28	523.55	19.69	497.33	7.28
MQA4A-96	291.73	0.34	8.07	7.64	0.07	1.34	753.02	54.33	925.01	27.62	753.02	54.33
MQA4A-97	270.12	0.43	5.87	2.14	0.07	0.37	1014.57	20.12	1045.40	7.57	1045.40	7.57
MQA4A-98	182.88	0.22	23.75	3.62	0.05	3.91	265.89	9.44	329.27	88.72	265.89	9.44
MQA4A-99	450.25	0.19	6.12	2.46	0.08	0.21	975.13	22.24	1088.12	4.30	1088.12	4.30
MQA4A-100	265.08	0.50	26.08	2.19	0.05	2.51	242.59	5.20	245.18	57.75	242.59	5.20
SZ-064_1	801.44	0.71	104.47	0.02	0.05	0.02	61.41	0.98	0.00	7.22	61.41	0.98
SZ-064_2	1120.66	0.33	105.62	0.02	0.05	0.02	60.75	0.98	84.96	43.61	60.75	0.98
SZ-064_3	789.68	0.43	109.21	0.02	0.05	0.02	58.76	0.99	0.00	44.94	58.76	0.99
SZ-064_4	1829.77	0.28	105.71	0.01	0.05	0.02	60.70	0.83	5.65	37.54	60.70	0.83

SZ-064_5	942.15	0.42	106.21	0.02	0.05	0.02	60.41	0.97	26.78	51.84	60.41	0.97
SZ-064_6	1483.67	0.44	105.27	0.02	0.05	0.02	60.95	0.99	59.87	42.57	60.95	0.99
SZ-064_7	997.33	0.32	105.19	0.01	0.05	0.02	60.99	0.90	54.63	49.49	60.99	0.90
SZ-064_8	1057.39	0.34	105.46	0.02	0.05	0.02	60.84	0.94	55.85	52.31	60.84	0.94
SZ-064_9	1156.47	0.35	103.45	0.02	0.05	0.02	62.02	0.97	55.09	44.61	62.02	0.97
SZ-064_10	1796.46	0.63	105.56	0.01	0.05	0.02	60.78	0.87	84.35	35.42	60.78	0.87
SZ-064_11	1342.07	0.35	104.03	0.02	0.05	0.02	61.67	0.95	3.98	44.72	61.67	0.95
SZ-064_12	696.72	0.35	105.31	0.02	0.05	0.02	60.92	1.06	0.00	35.68	60.92	1.06
SZ-064_13	785.87	0.23	103.94	0.02	0.05	0.02	61.72	1.10	165.51	50.74	61.72	1.10
SZ-064_14	1467.53	0.46	104.24	0.02	0.05	0.02	61.54	0.94	54.82	36.78	61.54	0.94
SZ-064_15	743.40	0.33	108.97	0.02	0.05	0.02	58.89	0.91	70.65	45.28	58.89	0.91
SZ-064_16	2032.53	0.31	106.73	0.02	0.05	0.02	60.12	0.99	75.02	35.90	60.12	0.99
SZ-064_17	978.05	0.36	104.93	0.02	0.05	0.02	61.14	0.92	0.00	0.00	61.14	0.92
SZ-064_18	1981.84	0.39	106.34	0.01	0.05	0.01	60.34	0.86	47.39	31.15	60.34	0.86
SZ-064_19	965.63	0.34	106.63	0.02	0.05	0.02	60.17	0.96	58.79	43.88	60.17	0.96
SZ-064_20	1476.03	0.40	107.43	0.01	0.05	0.01	59.73	0.82	27.42	34.19	59.73	0.82
SZ-064_21	1049.19	0.36	106.02	0.01	0.05	0.02	60.52	0.86	96.45	48.56	60.52	0.86
SZ-064_22	1909.93	0.46	105.69	0.01	0.05	0.02	60.70	0.89	101.37	40.13	60.70	0.89
SZ-064_23	622.32	0.31	109.59	0.02	0.04	0.03	58.56	1.08	0.00	0.00	58.56	1.08
SZ-064_24	816.32	0.46	104.93	0.02	0.05	0.02	61.14	1.01	159.22	53.87	61.14	1.01
SZ-064_25	1121.32	0.39	101.76	0.01	0.05	0.02	63.04	0.93	157.72	39.96	63.04	0.93
SZ-064_26	748.10	0.35	108.36	0.02	0.05	0.02	59.22	1.07	7.51	51.01	59.22	1.07
SZ-064_27	1365.27	0.35	104.96	0.02	0.05	0.02	61.13	1.03	111.27	38.37	61.13	1.03
SZ-064_28	1244.80	0.33	102.67	0.02	0.05	0.02	62.48	1.10	0.00	34.72	62.48	1.10
SZ-064_29	867.36	0.25	106.60	0.02	0.05	0.02	60.19	0.99	76.69	49.96	60.19	0.99
SZ-064_30	797.41	0.33	106.37	0.03	0.06	0.03	60.32	1.57	654.80	70.87	60.32	1.57
SZ-064_31	1599.79	0.19	104.25	0.02	0.05	0.02	61.54	0.95	55.50	41.17	61.54	0.95
SZ-064_32	1440.72	0.26	108.50	0.02	0.05	0.02	59.14	0.89	77.30	40.38	59.14	0.89
SZ-064_33	1733.51	0.34	106.77	0.02	0.05	0.02	60.10	0.91	29.40	35.76	60.10	0.91
SZ-064_34	1077.39	0.47	108.73	0.02	0.05	0.02	59.02	0.88	21.80	40.49	59.02	0.88
SZ-064_35	779.14	0.24	106.43	0.02	0.05	0.02	60.29	0.97	75.63	48.22	60.29	0.97
SZ-064_37	494.75	0.09	104.49	0.02	0.04	0.04	61.40	1.27	0.00	23.92	61.40	1.27
SZ-064_38	816.25	0.34	108.26	0.02	0.05	0.02	59.27	0.96	71.49	52.08	59.27	0.96
SZ-064_39	861.85	0.35	107.42	0.02	0.05	0.02	59.74	0.95	56.97	45.61	59.74	0.95
SZ-064_40	1751.37	0.29	108.86	0.02	0.05	0.02	58.95	1.07	85.75	38.56	58.95	1.07
SZ-064_41	701.31	0.24	106.85	0.02	0.05	0.02	60.05	1.10	0.00	15.72	60.05	1.10
SZ-064_42	955.87	0.36	104.41	0.02	0.05	0.03	61.45	1.06	70.67	58.75	61.45	1.06
SZ-064_43	2452.70	0.52	108.54	0.02	0.05	0.01	59.12	0.88	78.74	32.14	59.12	0.88
SZ-064_44	625.20	0.23	110.47	0.02	0.05	0.03	58.09	0.96	124.91	62.56	58.09	0.96
SZ-064_36	894.96	0.23	67.98	0.02	0.05	0.01	94.14	1.46	105.65	32.55	94.14	1.46
SG013_38	754.95	0.38	26.70	1.00	0.05	0.96	237.05	2.34	252.43	21.96	237.05	2.34
SG013_37	1364.89	0.55	26.66	0.76	0.05	0.82	237.37	1.78	245.02	18.70	237.37	1.78
SG013_36	564.40	0.35	26.64	1.05	0.05	1.16	237.51	2.45	332.35	26.20	237.51	2.45
SG013_35	477.30	0.31	26.72	1.05	0.05	1.20	236.82	2.43	202.38	27.64	236.82	2.43
SG013_34	985.41	0.43	26.91	0.93	0.05	0.88	235.21	2.14	225.85	20.25	235.21	2.14
SG013_33	719.28	0.32	17.62	1.36	0.06	1.11	355.79	4.71	419.97	24.65	355.79	4.71
SG013_32	291.49	0.73	6.06	3.15	0.07	1.01	983.89	28.69	988.07	20.39	983.89	28.69
SG013_31	778.11	0.27	27.61	1.06	0.05	0.96	229.35	2.39	221.80	21.99	229.35	2.39
SG013_30	544.71	0.33	26.84	0.96	0.05	1.06	235.78	2.22	242.66	24.15	235.78	2.22
SG013_29	769.11	0.34	27.08	0.85	0.05	1.06	233.76	1.95	180.91	24.52	233.76	1.95
SG013_28	444.07	0.40	26.56	1.14	0.05	1.15	238.24	2.66	324.32	25.99	238.24	2.66
SG013_27	558.94	0.39	27.50	0.92	0.05	1.03	230.27	2.07	211.66	23.70	230.27	2.07
SG013_26	1203.70	0.50	27.17	0.79	0.05	0.84	232.97	1.81	226.99	19.20	232.97	1.81
SG013_25	622.88	0.34	26.97	0.94	0.05	1.04	234.66	2.17	221.14	23.94	234.66	2.17
SG013_24	590.32	0.34	27.73	1.45	0.05	1.02	228.37	3.24	200.39	23.40	228.37	3.24
SG013_23	1475.95	0.49	27.31	0.84	0.05	0.88	231.81	1.90	259.63	20.11	231.81	1.90
SG013_22	1251.80	0.51	27.69	0.84	0.05	0.95	228.67	1.89	229.49	21.72	228.67	1.89
SG013_21	901.07	0.23	18.86	3.46	0.05	0.80	332.98	11.22	411.41	17.70	332.98	11.22
SG013_20	646.23	0.24	26.92	0.90	0.05	0.92	235.14	2.09	237.99	21.09	235.14	2.09
SG013_19	529.85	0.34	27.56	0.94	0.05	1.04	229.79	2.13	213.74	23.92	229.79	2.13
SG013_18	859.14	0.45	27.22	0.93	0.05	1.02	232.62	2.13	340.68	22.85	232.62	2.13
SG013_17	476.78	0.32	27.04	0.93	0.05	1.12	234.12	2.15	237.88	25.65	234.12	2.15
SG013_16	493.86	0.34	26.93	0.91	0.05	1.09	235.05	2.11	167.64	25.26	235.05	2.11
SG013_15	407.75	0.26	26.87	0.94	0.05	1.11	235.55	2.18	293.49	25.05	235.55	2.18
SG013_14	729.85	0.34	27.33	1.05	0.05	0.93	231.70	2.38	222.03	21.47	231.70	2.38
SG013_13	702.54	0.41	27.09	1.01	0.05	0.97	233.63	2.31	261.83	22.15	233.63	2.31
SG013_12	1302.11	0.47	27.35	0.81	0.05	0.76	231.52	1.84	203.65	17.57	231.52	1.84
SG013_11	120.99	0.31	26.70	1.34	0.05	2.09	237.01	3.12	252.68	47.27	237.01	3.12
SG013_10	1014.61	0.46	28.35	0.85	0.05	0.91	223.50	1.87	227.12	20.98	223.50	1.87
SG013_9	956.09	0.42	28.73	1.02	0.05	1.01	220.57	2.22	232.30	23.23	220.57	2.22

SG013_8	684.95	0.39	27.84	0.97	0.05	0.88	227.51	2.17	247.05	20.17	227.51	2.17
SG013_7	831.13	0.27	18.22	1.07	0.06	0.76	344.53	3.59	602.18	16.28	344.53	3.59
SG013_6	716.68	0.35	27.09	0.89	0.05	0.97	233.66	2.04	199.71	22.46	233.66	2.04
SG013_5	958.54	0.35	27.40	1.21	0.06	1.54	231.10	2.74	561.14	33.24	231.10	2.74
SG013_4	930.56	0.37	27.00	1.07	0.05	0.98	234.45	2.46	217.32	22.51	234.45	2.46
SG013_3	524.63	0.36	27.21	0.97	0.05	1.05	232.70	2.21	280.54	23.82	232.70	2.21
SG013_2	946.28	0.45	27.55	0.81	0.05	0.83	229.84	1.82	238.98	18.95	229.84	1.82
SG013_1	400.84	0.29	27.12	1.04	0.05	1.22	233.41	2.39	240.77	27.88	233.41	2.39